A COMPARISON OF THREE BASIC
LANGUAGE CONCEPT TESTS

by

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B.S., Kansas State University, 1976

A MASTER'S THESIS

submitted in partial fulfillment of the
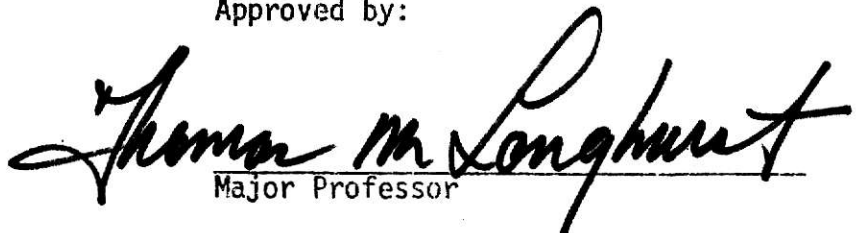
requirements for the degree

MASTER OF ARTS

Department of Speech

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1976

Approved by:

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Major Professor

TABLE OF CONTENTS

LISTING OF TABLES

ACKNOWLEDGEMENTS

INTRODUCTION

The mastery of various basic language concepts is considered important for success in the early school years. Assumptions that all children have automatically mastered the basic concepts necessary for understanding and following directions by the time they enter school may be questionable (Boehm, 1971). A study based on the data from the prestandardization of the tryout items of Form A of the Boehm indicated that 60% of children entering kindergarten may not be able to understand concepts such as "right end" or "below". Research also indicates that a pupil who is delayed with respect to other children his age tends to stay delayed. Arbor (1967) concluded that a child stays behind his classmates when he starts with a lack of basic concepts; further, the gap between good and poor achievers tends to become wider and wider over time. Engelmann (1976) indicated that a teacher may notice that a certain child is not responding in a new learning situation, but she may not know why. The teacher may think the child has a general problem, when the problems are quite specific. It is generally agreed by Engelmann (1967), Boehm (1971), and Bangs (1975) that some method of measuring these specific problems is important. All three indicate the need for basic language concept tests to identifying children with difficulty in the basic concept area.

Traditional methods of measuring the extent of a child's vocabulary as it compares with peers usually has been accomplished by various picture vocabulary comprehension tests, Full Range Vocabulary Test (Ammons and Ammons, 1948), Peabody Picture Vocabulary Test (Dunn, 1959) and defining words, Stanford Binet Intelligence Scale (Terman and Merrill,

1960), <u>Wechsler Intelligence Scale for Children</u> (Wechsler, 1974). Determining a general vocabulary age level, however, does not provide information regarding the kind of words, for example, pronouns, prepositions, and size that a child has in his lexicon. Basic concept tests such as those evaluated in this study were designed to provide more specific information on the type of words a child does or does not have in his vocabulary.

Three basic concept tests which are currently available for clinical usage were evaluated by administering the tests to the same subjects in the current study. The <u>Test of Basic Concepts</u> (Boehm, 1969; revised, 1971), the <u>Basic Concept Inventory</u> (Engelmann, 1967), and the <u>Vocabulary Comprehension Scale</u> (Bangs, 1975), hereafter referred to as the Boehm, Engelmann, and Bangs respectively, were comparatively evaluated in an attempt to determine their efficiency in estimating a preschool child's ability to understand basic concepts.

None of these tests have been examined extensively by other authors. No study has comparatively evaluated the Boehm with the Engelmann or the Bangs. The use of the Boehm is becoming increasingly widespread although relatively little literature is available regarding it. The Bangs is a new test thus little research has been conducted utilizing it beyond that reported by the author of the test.

The Boehm is designed to measure children's mastery of concepts considered necessary for achievement in the first years of school. According to Boehm (1971), results may be used to identify children with deficiencies in the basic concept area, in addition to identifying individual concepts on which the children could profit from instruction. The test consists of 50 test items. The subject was asked to mark an

X on one of three pictures which represented the concept presented orally by the examiner.

The Engelmann assesses basic concepts that are involved in new learning situations in the first grade. Even though the Engelmann is not a complete checklist of basic concepts, the test attempts to provide information about skills that are perhaps more basic, that is, less likely to be taught, and less likely to be noticed by a teacher. The Engelmann consists of 85 items arranged according to sections. The subject is required to produce a variety of responses. The subject is instructed to use a pointing response in part one of the test. A verbal response to questions in addition to verbal imitation of statements presented by the examiner, are the required responses in part two. In the third area, the subject was required to produce a yes/no response, repeat series of digits and groups of digits in series, as well as identify words when presented segmented words, for example, "bat-man".

The Bangs is designed to provide teachers of language and learning handicapped children with baseline information related to comprehension of pronouns and words of position, quality, quantity, and size. The test consists of 61 items divided into the five categories mentioned above. The subject is required to manipulate objects when presented verbal instruction by the examiner.

The three tests were evaluated on procedures, materials, test instruction, and appropriateness of each test. A more complete description of the three tests is provided in Appendix A.

The present experiment was conducted in an attempt to study these tests on a single population so that the differences between the test might be examined more closely. This study was designed to contribute

to a more knowledgeable selection of a basic concept test for clinical use.

METHOD

Subjects

Eighteen children, ranging in age from 4.3 years to 5.9 years, with a mean of 4.7 years served as subjects. No children below the chronological age of four years were accepted as subjects. Five subjects were attending preschool at the Kansas State University Developmental and Infant Child Care Centers. The remaining thirteen were chosen from a rural Kansas Community. All subjects were of middle socioeconomic status, and exhibited no known physical, mental or neurological handicaps. All subjects spoke English as their native language. No attempt was made to control the sex ratio of the sample.

Pretest

The Peabody Picture Vocabulary Test (PPVT) Form A. (Dunn, 1959) was administered to each subject prior to administration of the basic concept tests. Vocabulary intelligence quotients on the PPVT ranged from 85 to 134 with a mean of 107. The mean mental age on the PPVT was 5.7 years with mental age scores ranging from 4.0 to 7.1 years.

Experimental Setting and Procedure

The tests were administered in a quiet room at either the child's school or home. The subject was seated at a table facing the examiner for all test administration. Testing times for the subjects were arranged with the teachers or parents according to their schedules. Testing was conducted at the school three days a week for a period of

three weeks for five of the subjects. The remaining thirteen children
were tested over three day periods throughout the summer depending on
their daily schedules.

The tests were administered in a random order to each child. Each
subject responded to three tests and no subject was administered more
than one test per session. The administration time of each test was
recorded for each subject. Individual sessions ranged from 8 to 35
minutes. The standard instructions provided in the manuals by Boehm
(1971), Bangs (1975), and Engelmann (1967) were presented to each subject
prior to administration. Tests were administered according to the in-
structions provided by the authors. Responses were recorded on score
sheets accompanying each test as directed by the test authors.

Test Comparison Criteria

The examiner collected subjective notes about various characteri-
stics or administration procedures. These notes were compiled and
compared after the tests were administered to all of the subjects. The
tests were compared using the following criteria: test instruction,
practice items, stimulus items, vocabulary and object training pro-
cedures, method of stimulus presentation, type of responses, scoring
procedures, number of test items, administration time, retest ability,
data analysis, normative data, and validity and reliability data.

Boehm (1971) presents the percent of kindergarten, first and second
grade children passing each item and the percentile equivalents of raw
scores according to grade and socioeconomic levels. These normative
data did not apply to the current study, due to the age range of the
subjects. Bangs (1975) provides data for each concept tested, but
does not provide an overall score. Engelmann (1967) suggests that the

number of incorrect responses be counted, although, no norms were provided. Therefore, to allow for comparison of the test results of the 18 subjects, a common scoring procedure was necessary. For comparison purposes, the ratio of correct to incorrect responses was computed for each of the tests.

RESULTS AND DISCUSSION

The Boehms, Engelmann, and Bangs were each divided into 13 areas, so that the comparison of the tests could be simplified. Characteristics of these tests were evaluated in each area, and comments were made by the examiner.

Test Instructions

The items on the Boehm were presented uniformly throughout test administration. Instructions include: a brief description of the items tested, the procedures specifying the stimulus to be presented to the child, and the response criterion required for the examiner to record a correct response. The stimulus is printed in boldface type with key phrases in each item. All stimuli were read twice. Each phrase contains italicized words which are emphasized when presented to the child. Due to the organization of the test and specific instructions, the Boehm was easy to administer.

The Engelmann provides the examiner with procedures and scoring guidelines for each item. Instructions provide alternatives for physically handicapped children, as well as those with articulation errors. A booklet containing test questions and score sheets is provided separate from the test instructions, thus simplifying

administration. Although specific and complete instructions are pro-
vided, the administration of Engelmann would be further simplified if
the instructions were not as lengthy.

The Bangs presents a brief description of the materials used in
administration. Test items, score sheets, and norms are contained in
a single booklet separate from the test manual. General and specific
instructions are unclear or the examiner was required to compensate
for instructions that are not provided. Although the Bangs was the
easiest and quickest of the three tests to administer, more specific
instructions are needed.

Stimulus Items

Visual and auditory stimuli were used on the three tests. The
Boehm consists of 50 items arranged in order of increasing difficulty.
The items are divided into 2 booklets of 25 test questions each. Each
booklet contains three sample questions. The test items consist of a
set of black and white pictures. A specific statement briefly des-
cribing the concept being tested was read aloud to the child and he
had to choose from the set of pictures.

Test items on the Engelmann are arranged according to sections.
Part one, consisting of 46 items, requires the child to identify the
correct items when presented black and white multi-object pictures in
addition to the name or description of the object. Part two, which
assesses statement repetition and comprehension, consists of 24 test
items. Eight statements were presented orally by the examiner in addi-
tion to 16 questions that were implied by the statements. This aided
the examiner in testing the child's ability to understand and repeat
simple sentences. Part three, pattern awareness, consists of 15 test

items. This section is subdivided into three patterning tasks. The first patterning task is designed to determine the child's ability to note the sequence of two events. The examiner demonstrated the sequence (slap table---clap) four times while saying, "I'm doing it the right way." The child was then required to perform the task. Following the child's performance, the examiner executed the sequence correctly and incorrectly. The child was required to distinguish the correct from the incorrect performances. The second area of pattern awareness requires the child to repeat series of digits, such as, 7-7, 4-4. The purpose of these tasks were to determine whether or not the child could figure out the pattern used in expanding a digit series. The third subdivision requires the child to identify words when seq-mented sounds, for example, "m--ilk" are presented. The author suggested this is to aid the examiner in determining the child's under-standing of the kind of patterning on which analogies are based.

The Bangs consists of 61 items divided into 5 categories: pronouns, quality, quantity, position, and size. The items are tested by using objects the child manipulates himself. The objects are presented in the following scenes: a garage flanked by trees, a fence, ladder, cars, and a dog; a tea set and a boy and girl doll; a box containing various sized buttons; and miscellaneous items such as, sticks and blocks. Objects rather than pictures are used with the thought of increasing reliability of responses.

The child's interest was easier to obtain and maintain on the Bangs than on the Boehm or the Engelmann. The examiner believed this to be due to the use of objects instead of pictures or auditory stimuli independently.

Object or Vocabulary Training

The Bangs is the only test of the three which includes a vocabulary or object training procedure. Prior to administration of the Bangs, the subjects were administered an object training procedure which required correct identification of each item used in testing. This procedure enabled the subjects to become familiar with the stimulus items before proceeding with testing. The test manual does not provide procedures for training objects if the child fails to identify a certain object. All subjects were capable of identifying all objects for the test; therefore, the examiner did not encounter any difficulty with the procedure. The minimal instructions could present difficulty when a child incorrectly identified an object.

This orientation to the objects appeared to be an advantage in comparison with Boehm and Engelmann even though the procedure lacked specific instructions. In both the Boehm and Engelmann the examiner was uncertain if the child responded incorrectly due to insufficient understanding of the concept tested, or the objects or pictures used in testing.

Method of Stimulus Presentation

Visual and auditory stimuli were provided directly from the test instruction manuals and accompanying test booklets for both the Boehm and Engelmann. The Boehm and Engelmann are designed to yield fairly consistent results due to the rigid presentation of stimuli. Even though auditory and visual cues are used in the administration of the Bangs, the results may vary since the test is not strictly controlled by the author's instructions. Individual examiner differences in judgements of correct or incorrect responses may vary between examiners.

Type of Responses

Boehm requires the subject to respond by placing an X on one of a group of pictures. The child is permitted correction of any response by erasing or circling the wrong picture and marking the new answer in the regular way.

The Engelmann, which consists of three parts, requires a variety of responses. In part one the child is required to point to the object or objects when presented a multi-object picture in conjunction with verbal instructions such as "Find the table". In part two, the examiner made statements such as "The bread is under the oven," and instructed the child to repeat the statement. The child was also required to answer implied questions such as "Where is the bread?" In part three the subjects were instructed to respond "yes" or "no", or indicate by nodding or shaking their heads, whether the examiner's performance of two events was the same sequence previously presented. The subjects were also required to repeat digit sequences of varing length presented by the examiner. Three test items in part three require the child to verbally identify words such as "m--ilk".

The Bangs test requires the child to manipulate objects. The examiner presented verbal instructions to the child and required him to perform the tasks using the objects provided by the test.

Although the varied responses on the Engelmann provides a less monotonous test setting, the examiner noted that changing instructions sometimes confused the subjects. Instructions for part two and three were frequently repeated before the child expressed understanding. The examiner considered Boehm's identification response of marking an X on the picture an asset since the pictures and response itself appeared

to interest most of the subjects. Bangs (1975) and the present examiner consider the use of objects rather than pictures to increase reliability of responses on the Vocabulary Comprehension Scale. The manipulations of the objects appeared to maintain the subjects' attention more effectively than either the Engelmann or the Boehm. Following administration of the Bangs, the subjects frequently expressed the desire to continue the testing, while a similar request was not expressed on either of the other tests.

Scoring Methods

The subjects marked the picture or pictures on the Boehm, thus, the examiner did not attempt to score the items as correct or incorrect during the test administration. The ratio of correct to incorrect items was determined for each of the subjects. The Boehm required additional time to score after the test was administered. The examiner compared the pictures selected by the subjects with the correct responses which were presented on a key prepared by the examiner.

The examiner marked the number of picture selected on part one of the Engelmann. The correct response on each test item is underlined. One point was scored for each incorrect response. Part two required the examiner to circle either 1,2,3 or 4 depending on the number of trials necessary for the child to repeat the statement presented by the examiner. No points were scored if a subject successfully repeated the statement on the first trial; one point was scored on the second trial; two on the third; three on the fourth, and four points were scored if the subject failed to successfully repeat the statement after the fourth trial. The examiner wrote the subject's responses to the questions on part two in the area provided on the score sheet. Guidelines for correct responses

are provided for each question on the score form. No points were scored
if the subject responded correctly. One point was scored if a response
was incorrect. Item 14 was scored as a pair, thus 2 points were scored
if 1 or both parts were incorrect. Yes/no and pass/fail columns are
provided in part three of the Engelmann. Scoring consisted of one point
for every incorrect response. Tasks in item 19 were paired. Two points
were scored if either or both parts of the pair were incorrect. No
attempt was made to score the items as correct or incorrect during
administration of the Engelmann. The ratio of correct to incorrect
responses was determined for each subject.

The Bangs was scored as a plus for correct responses and a minus
for incorrect responses. The total score was derived by adding the
number of correct responses on the test.

The tests require objective scoring of responses according to the
correctness or the incorrectness of the responses. The Boehm required
additional scoring time following test administration; however, the
Engelmann was the most time consuming to score of the three tests. The
Bangs was the only test that did not require additional scoring time
after test administration.

Number of Test Items and
Administration Time

The Boehm consists of 6 practice items and 50 test items divided
evenly between 2 booklets. Engelmann consists of 46 items designed to
test the child's handling of selection criteria, ability to follow
instructions, and size of vocabulary; 24 items testing the child's
ability to repeat statements and answer implied questions; and 15 items
testing the child's understanding of patterns. A 19 item object training
procedure and 61 test items comprises the Bangs test.

Total test administration time of the Boehm is reported as approximately 15 to 20 minutes for each test booklet. The mean time for Boehm administration based on 18 subjects was 25 minutes, approximately 12.5 minutes for each test booklet. The time required for the practice items was minimal ranging from approximately 1 to 3 minutes.

The mean time required to administer the items on the Engelmann was approximately 23 minutes based on the 18 subjects. The manual indicates the average test administration time as approximately 15 to 20 minutes.

One advantage of the Bangs was the length of time required for training test objects in addition to administration of test items. Reportedly administration time of the Bangs is 5 to 10 minutes. The mean test administration time, based on 18 subjects, was 10.5 minutes including the time required for training the 19 objects. The examiner considered this an advantage over the Boehm and the Engelmann, which required more time for administration, thus increasing the difficulty of maintaining the subject's attention during the complete session.

The examiner considered the Bangs better organized than the Boehm or the Engelmann, because the tasks on the Bangs vary and involve the child, thus reducing the monotony of the test session. The child's task remained the same throughout administration of the Boehm; therefore, the test was not as effective in maintaining the child's attention. Although the tasks vary on the Engelmann, the subject's attention was more difficult to maintain than on the Bangs due to the length of the test and the administration time required. The subjects attended best to the Bangs test.

Retest

A form B is available for the Boehm which was designed to parallel Form A in both coverage and difficulty level. Engelmann and Bangs do not include a specific second form of their tests. This feature on the Boehm would serve as a valuable asset should a subject perform poorly on the initial testing and require further testing or as a pretest - postest.

Test Score Analysis

Boehm vs. Engelmann

As shown in Table 1, the ratio of correct to incorrect responses on the Boehm ranged from 1:1.1 to 4:1 with a mean ratio of 1.8:1 as compared to a mean of 3:1 on the Engelmann with ratios ranging from 1.5:1 to 5.8:1. The number of correct responses on the Boehm ranged from 24 to 40 with a mean of 32 out of 50. The mean number of correct responses on the Engelmann was 82 out of 109 with scores ranging from 66 to 93.

Boehm vs. Bangs

The ratio of correct to incorrect responses on the Bangs ranged from 4.5:1 to 60:1 with a mean of 11.2:1 as compared to a mean of 1.8:1 on the Boehm with ratios ranging from 1:1.1 to 4:1. The mean number of correct responses on the Bangs was 56 out of 61 with scores ranging from 50 to 60 items correct. The mean number of correct responses on the Boehm was 32 out of 50 with the scores ranging from 24 to 40.

Bangs vs. Engelmann

Scores on the Bangs were consistently higher than those on the Engelmann. The mean ratio of correct to incorrect responses on the Engelmann was 3:1 with ratios ranging from 1.5:1 to 5.8:1. The ratio of

correct to incorrect responses on the Bangs ranged from 4.5:1 to 60:1 with a mean of 11.2:1. The mean number of correct responses on the Bangs was 56 out of 61 with scores ranging from 50 to 60 items correct. The mean number of correct responses on the Engelmann was 82 out of 109 with scores ranging from 66 to 93.

Normative Data

Boehm

Boehm reports normative data collected on 2,204 children from low, middle, or high socioeconomic levels. There were 671 kindergarten, 823 first-grade, and 710 second-grade children tested. The percent of children passing each item on the Boehm is presented according to the grade and socioeconomic level. Percentile equivalents of raw scores by grade and socioeconomic levels are provided in the manuals. The percentile designations are the midpoints of bands which are five percentile units wide. Means and standard deviation of the scores are also provided in the manual. Further normative data obtained over a wider age range would increase the value of the Boehm. Boehm's present data would be more precise and meaningful if age levels rather than grade levels were reported since the ages of kindergarten, first, and second grade can vary within a single class. However, if the Boehm was used primarily to identify children in need of remedial concept training, or concepts unfamiliar to a large proportion of children, normative statistics would not be as important.

Engelmann

Age norms for the experimental edition of the Engelmann are not provided. Although there are limitations of the test without normative data, the inventory could be used effectively in directing teachers to

Table 1

Ratio of Correct to Incorrect Responses
on the Boehm, Engelmann, and Bangs

Subject	Boehm	Engelmann	Bangs
1	1.2:1	2.5:1	4.5:1
2	1.5:1	1.5:1	19.3:1
3	1.5:1	2.6:1	7.7:1
4	1.9:1	3.4:1	19.3:1
5	2.9:1	3.4:1	19.3:1
6	2.3:1	4.2:1	11.2:1
7	2.3:1	4.7:1	11.2:1
8	1.2:1	3.5:1	7.7:1
9	1.6:1	2.9:1	9.1:1
10	1.6:1	2.9:1	11.2:1
11	1.2:1	1.7:1	4.5:1
12	1.9:1	2.5:1	19.3:1
13	1.2:1	2.8:1	11.2:1
14	1:1.1	5.8:1	7.7:1
15	2.6:1	3.7:1	14.2:1
16	3.5:1	3.0:1	60.0:1
17	4.0:1	5.0:1	60.0:1
18	2.6:1	4.4:1	11.2:1
Mean	1.8:1	3.0:1	11.2:1

certain areas of weakness. The test would be more useful; however, if precise data were available for each section of the Engelmann.

Bangs

The standardization sample for the Bangs includes 80 subjects from low-middle to high-middle socioeconomic levels. All subjects were enrolled in preschool programs in Houston, Texas, and the sample was of mixed ethnic backgrounds. Ten children in each six month age level between two and six years were tested. The age level selected for comprehension of the majority of the test words was the point at which 80% or better of the subjects comprehended the words tested. Furthermore, the criterion was repeated as subsequent age levels. A table consisting of the percentage of students who met criterion for each word at six month age intervals is provided in the manual. The age level at which each test word should be stable in a child's lexicon is provided on the summary sheet of the score form.

Bangs allows for a much finer age distinction than the Boehm which is roughly divided into three grade levels and the Engelmann, which does not provide any normative data. When considering the emphasis currently placed on evaluation of children with possible speech and language deficits at an early age, the age range of the Bangs is more applicable.

Reliability and Validity

Boehm reported that split-half reliability coefficients were computed for Form A and B. For Form A, these coefficients are .90, .85, and .81 for kindergarten, grade 1, and grade 2 samples, respectively. The split-half reliability coefficients for Form B are .84, .83, and .87

for the same grade levels. Alternate form reliability was reflected in coefficients of correlation between the two forms of the test and indicated the level of consistency of measurement across these two forms. The alternate form coefficients range from .55 to .92, with a median of .76, thus these coefficients tend to be somewhat lower in magnitude than those obtained by the split-half method.

Boehm does not report any formal validity tests; however, she states that the test items were selected from relevant curriculum materials and represented concepts basic to understanding directions and other oral communications from teachers at the preschool and primary age level. Engelmann reports that no predictive or constructive validity was established for his test. He suggested that the process of item construction and selection was intuitive and informal. Certain conceptual problems were identified through the observation of learning inadequacies in the Bereiter-Engelmann preschool and kindergarten classes. From the original set of problems identified, tasks which could not be presented with simple instructions were eliminated. Other tasks were scrutinized for response ambiguity, and those that tended to present problems were either revised or discarded. Engelmann states that reliability of many items in his test have been tested; however, data are insufficient and are not reported.

The Bangs is the only test that does not report any type of reliability or validity estimated. This may be a disadvantage and since her test is quite new these data may be forthcoming in subsequent revision. No attempt was made to ascertain interexaminer or intraexaminer reliability for any of the tests evaluated. The Boehm is the only test that provides formal reliability, while all three tests lack validity estimates. The

value of the Boehm, Engelmann, and Bangs would probably be increased if sufficient validity and reliability data were provided for each test.

SUMMARY AND CONCLUSIONS

Even though some of the concepts tested on the Boehm, Engelmann, and Bangs are similar, a brief appraisal indicated that the tests differ in administration time, type of responses, stimulus presentation, scoring procedures, and normative data.

The Bangs was considered the best basic concept test of the three evaluated. The Bangs could be used as a screening instrument due to the short time required for test administration. The test also provides sufficient baseline information related to the comprehension of pronouns and words of size, position, quality, and quantity; therefore, Bangs could also be used as a diagnostic instrument. Another advantage of the test is that it requires the manipulation of the test items rather than a verbal or pointing response, thus Bangs maintained the subjects attention better than the Boehm or the Engelmann.

The Bangs was the easiest to administer and score due to the booklet which provides a list of test items, a scoring area, in addition to norms. The Bangs is the only test of the three evaluated that provides normative data for each concept tested. The test does not provide reliability and validity data however. The primary disadvantage of the Bangs was the lack of specific instructions for the examiner.

The Boehm was reguarded as suitable for a diagnostic instrument to be used with children who indicated difficulty in comprehension of concepts on a screening test and further evaluation was desired. The time required to administer the Boehm was approximately twice as long as

for the Bangs. The test was easy to administer due to the specific instructions and the organization of the test. The Boehm was effective in maintaining the subject's attention throughout the majority of the test. The required response, in which the child placed an X on one of a group pictures, was probably the primary reason the test maintained the subjects' interest. The Boehm is the only test that provides a percentage of children passing each item according to the grade and socioeconomic level. The test could be used to identify children that are unfamiliar with certain concepts that need remedial training in this area; however, the normative data may be more valuable and meaningful if a wider age range was included, in addition to the use of age levels rather than grade levels since the ages of children in a single classroom can vary.

The Engelmann was considered more suitable as a diagnostic instrument to be used for further evaluation in the concept area. The test required approximately the same length of time to administer as the Boehm, and approximately twice as long to administer as the Bangs. The Engelmann was effective in maintaining the children's attention probably because the tasks on the test varied thus reducing the monotony for the subjects. The Engelmann is the only one of the three tests that requires a vocal response in addition to other responses. The Engelmann is a criterion referenced measure, thus no normative data are provided. The lack of these data made the task of determining where a child was in relationship to his chronological age level extremely difficult if not impossible. The Engelmann was also time consuming to score.

Test scores were considerably higher on the Bangs than on the Engelmann or the Boehm. As noted by the examiner, this could be due to

the type of stimulus, in addition to the required response on the Bangs. Neither the Boehm nor the Engelmann use objects as stimuli; while, the Bangs stimuli consists primarily of objects.

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APPENDIX A

Description of the Three Basic Concept Tests

Boehm, A., <u>Boehm Test of Basic Concepts</u>. The Psychological Corporation, New York, N.Y., 1971. (Cost: $14.60)

The Boehm Test of Basic Concepts is designed to identify children who have an overall low level of concept mastery as presented on a printed page, or to identify the concepts with which large numbers of children in a given class may be unfamiliar. The test consists of two forms. Items for Form B were written to parallel those included on Form A. Like numbered items on the two forms measure the knowledge of the same basic concept.

Each form consists of 50 pictorial items arranged in approximate order of difficulty and divided evenly between two booklets. Each booklet contains three samples followed by 25 test items. Each sample and test item consists of a set of three pictures. The test is read aloud by the examiner and the subject is required to mark an X on the picture illustrating the concept briefly described by the examiner.

The test can be administered individually or in a small group. The percentage of children passing each item on the Boehm is presented according to the grade and socioeconomic levels. Normative data consists of percentile equivalents of raw scores by grade and socioeconomic levels. Means and standard deviations of the scores are also provided in the test manual. The normative data ranges from kindergarten through second grade.

The record form of the Boehm consists of the sample items and the test items. Blanks are not provided for the examiner to record the child's responses. The examiner is required to score the test after rather than during the administration of the test.

Englemann, S. The Basic Concept Inventory. Chicago, Illinois, Follett Publishing Company, 1967. (Cost: $19.32).

The Basic Concept Inventory is designed to identify the effectiveness of a child's/children's previous instructions in certain basic concept areas. The test can provide information for the teacher concerning the concepts requiring remedial instruction. The test consists of three sections: basic concepts; statement repetition and comprehension; and pattern awareness.

The basic concept section was designed to determine the child's ability to handle different types of selected criteria such as plurals, conjunctions, size, etc. The child should be able to follow basic instructions and have an understanding of content words that are used in the instructions in order to respond correctly. The stimuli used are pictures in addition to the name or description of the concept tested. The child is required to respond by pointing to each picture representing the concept tested. There is a total of 46 items tested in section one.

The statement repetition and comprehension section tests the child's ability to repeat statements and to answer the questions implied by these statements. The child should be able to understand what the statements mean and be able to repeat them otherwise his familiarity with these statements is considered inadequate. Section two consists of 8 statements which are presented orally by the examiner in addition to 16 questions that are implied by the statements.

Pattern awareness section, consisting of 15 items, is subdivided into 3 patterning tasks. The first task is designed to determine the child's ability to note the sequence of two events. The second pattern

awareness task requires the child to repeat digit series and analogous series. The third subdivision is designed to determine the child's ability to understand the type of patterning on which analogies are based. The child is required to identify a word when presented sounds, such as, "bat----man."

The score sheet lists the test stimuli. Beside each item is a column designating the correct response in addition to the possible choices. The examiner scores responses by circling the child's choice. Section two requires the examiner to write out the child's verbal response to the questions. Errors are scored after test administration is completed by totaling the points by incorrect responses. A low score equals good performance since points are given for incorrect responses. No normative data are provided and reliability and validity studies are forthcoming since the test is an experimental version.

Bangs, T. E. <u>Vocabulary Comprehension Scale</u>. Learning Concepts. Austin, Texas, 1975. (Cost: $34.95).

The Vocabulary Comprehension Scale is designed to provide baseline information related to comprehension of pronouns, and words of quality, quantity, size and position. The test consists of two sections; a training procedure, and the test items.

The training procedure was designed as an attempt to familiarize the subject with each object used in the test. The subject is required to name or identify each object prior to test administration.

The 61 test items are divided into five separate areas: position, pronouns, quality, quantity, and size. The items are tested by using objects the child manipulates following verbal stimuli presented by the examiner. The objects are presented in the following scenes: A garage flanked by trees, a fence, ladder, four cars, and a dog; a tea set and boy and girl dolls; a box containing different sized buttons; and miscellaneous items, such as, blocks and sticks.

Normative data are provided for each concept and ranges from 2.0 to 6.0 years. Reliability and validity data are not provided at the present time. The score sheet includes test directions for eliciting responses from the child and blanks for recording pass (+) or fail (-) in addition to a summary section. The summary section provides a rapid view of the items responded to correctly or incorrectly plus normative data for each concept tested.

A COMPARISON OF THREE BASIC
LANGUAGE CONCEPT TESTS

by

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B.S., Kansas State University, 1976

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF ARTS

Department of Speech

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1976

ABSTRACT

Three basic language concept tests were compared by adminis-
tering each of them to eighteen preschool children ranging in age
from 4.0 to 5.0 years. The tests evaluated were the Boehm Test of
Basic Concept by Boehm, the Basic Concept Inventory by Engelmann,
and the Vocabulary Comprehension Inventory by Bangs.

The ratio of correct to incorrect responses on each test were
determined. The tests were compared and evaluated on the type of
test instructions, practice items, stimulus items, vocabulary and
object training procedures, type of stimulus presentation, type of
responses, scoring procedures, number of test items and administra-
tion time, retest ability, normative data, and validity and relia-
bility data. Advantages and disadvantages of these three tests
were discussed. The results of the comparison indicated a similarity
between the Boehm and the Engelmann, while the results of the Bangs
were considerably different.