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ABSTRACT

Research attempted to determine the appropriate level of the past tense of verbs classified in the Functional Basic Word List for Special Pupils (Stanwix House List). The subjects were primary level educable mentally handicapped (EMH) children. Eight verbs were selected from each of groups A, B, and C of level 1 of the Stanwix House List. Results of individually administered recognition procedures indicated that EMH children of primary level use the past tense at or near the level established for the present tense. The data also disclosed significant racial differences with regard to past tense usage, for black subjects tended not to pronounce the final--ed of the past tense, although they were able to conceptualize the meaning of the past tense. Additional research should: 1) focus on children of lower mental age to see if the present and past are equally recognized; 2) determine if subjects visually associate the present and past tense forms of a verb; and 3) further investigate the racial differences in past tense usage. This research is part of the Computer Based Project for the Evaluation of Media program to develop an instrument to analyze the vocabulary level of films and test items presented to EMH students. (Author/PB)

OBSERVATIONAL REPORT #7228
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December 1972

STANWIX HOUSE VOCABULARY STUDY: PAST TENSE VERBS

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ABSTRACT

This study attempted to determine the appropriate level of the past tense of verbs classified in the Functional Basic Word List for Special Pupils (Tudyman and Groelle, 1958). The subjects were primary level Educable Mentally Handicapped childrn (EMH). Eight verbs were selected randomly from each of groups A, B, and C - level 1 of the Functional Basic Word List. The results of individually administered recognition procedures indicated that children of primary level seem to be able to use the past tense of verbs at or near the level established for the present tense. The data also disclosed significant racial differences with regard to the use of the past tense; these findings are discussed in relation to similar findings in previous studies.

SPECIAL REPORT No. 7228
COMPUTER-BASED PROJECT for the EVALUATION of MEDIA for the HANDICAPPED

Title: STANWIX HOUSE VOCABULARY STUDY: PAST TENSE VERBS

BY: Jaffa Kessler & Jack H. Bond

BACKGROUND

The Computer Based Project for the Evaluation of Media for the Handicapped, based on contract #OEC-9-423617-4357 (616) between the Syracuse (N.Y.) City School District and the Media Services and Captioned Films Branch, Bureau of Education for the Handicapped (United States Office of Education) for the five year period July 1, 1969 through June 30, 1974. The major goal is to improve the instruction of handicapped children through the development and use of an evaluation system to measure the instructional effectiveness of films and other materials with educable mentally handicapped (EMH) children, in-service training and media support for special teachers, and studies related to the evaluation process and the populations used.

The Project has concentrated on the 600 films and 200 filmstrips from the Media Services and Captioned Films (BEH - USOE) depository; however, specific packages from Project LIFE, various elementary math curricula, and selected programs from Children's TV Workshop have also been evaluated. The evaluation model used requires that: 1) objectives of materials be specified and written; 2) instruments be constructed to test and measure effectiveness; and, 3) children be the major sources of evaluation information. A number of instruments and methodologies are employed in the gathering of cognitive and affective data from 900 EMH children and 80 special teachers to make the effectiveness decisions. Over half of the EMH population can neither read or write; therefore, a unique Student Response System (SRS) is employed, consisting of a twenty station G.E.-1000 SRS which can be operated in a group or individual recording mode and is connected to a remote computer system. The computer capabilities consist of remote telephone connections to the Rome (N.Y.) Air Development Command, the Honeywell time-shared network, and the Schenectady (N.Y.) G E Research and Development Center; and batch mode capabilities of the Syracuse City Schools, Syracuse University, and various commercial sources.

In-service and media support activities provide on-the-job training for teachers, teacher aides, equipment, and materials to the special teachers in the city schools. The research activities have centered around investigations and special problems related to the development of the evaluation model. The four major areas considered are: 1) testing effects, 2) captioning effects, 3) special student characteristics; and, 4) evaluation procedures validation.

Documentation of the major activities appear in the five annual reports and the 600 evaluations prepared on materials used. Staff members were encouraged to prepare special reports and the attached paper is one of these. The opinions expressed in this publication do not necessarily reflect the position or policy of the Computer Based Project, the United States Office of Education, or the Syracuse City School District, and no official endorsement by any of the agencies should be inferred.

Observation Report #7228
Jaffa Kessler
Jack H. Bond
December 1972

STANWIX HOUSE VOCABULARY STUDY - PAST TENSE VERBS

At the Computer Based Project for the Evaluation of Media (CBP, 1972) an instrument is being developed to analyze the vocabulary level of films and test items presented to mentally handicapped students (EMH). This analysis is done by using as a standard the Functional Basic Word List for Special Pupils (Tudyman and Groelle, 1958), hereafter referred to as the Stanwix House List.

In the Pilot Project Report (Lewis, 1972) three reading, written and oral vocabulary strata (primary, intermediate, and secondary) of the handicapped student population were examined and compared against the difficulty classifications of the Stanwix House List. The detailed testing and rating procedures used in this study consisted of a verbal recognition test in which a child read a given word; a written word list where a child was asked to place a written word in context, and an oral word meaning list where the child was asked to use the word in a sentence and give either a definition or an antonym. The results of these procedures indicated that the Stanwix House List was appropriately designated as to level for the EMH students in the City School System.

It was assumed that instructional media to which students were exposed were appropriate and intelligible at the child's level of learning, and that his vocabulary level represented one index of such a level.

PROBLEM

Whereas the Lewis study dealt with general levels of the words in the Stanwix House List, it did not include vocabulary the past tense of the regular verbs as separate words; specifically, those words requiring "ed" endings. This study attempts to identify these words to determine the appropriate level of the past tense of these verbs compared to the level of the present tense on the Stanwix House List. The procedures used to make this determination are also a subject of this study.

HYPOTHESES

Assuming a procedure is developed to obtain differential responses from EMR children, the following hypotheses will be used to decide the outcomes:

H_0 The level at which a child recognizes the past tense of a verb will correspond to the same level at which the child recognizes the present tense of the verb.

H_1 The level at which a child recognizes the past tense of a verb will be higher than the level at which the child recognizes the present tense of the verb.

METHOD

SUBJECTS

Ten primary EMH children (C.A. range 7-9; Mean M.A. 6 years, 5 months) consisting of 6 girls and 4 boys served as the test population. These children were selected randomly from two available EMH classrooms and tested individually.

WORD CHOICE CRITERION

The investigator chose at random eight words from each of groups A, B, and C - Level 1, from the Stanwix House List. Each of these words was a regular verb (Listed in Table on page 5) which required an "ed' ending for the past tense form. The student was tested on a total of 24 words, each of which was printed on a 3 x 5 index card.

PROCEDURE

The selected student was taken from his classroom to a testing area. He was then seated at a table with the examiner and participated in one or more of the methods to indicate his knowledge of the past tense word form. Initially, the examiner attempted to employ the procedures developed by Lewis; these, however, proved ineffective in obtaining the information sought as discussed below. Three procedures were tried out before discernable differences seemed to appear. These are described as Pilot Test 1, Pilot Test 2, and Pilot Test 3.

PILOT TEST 1 - The examiner asked the subjects to read the present form of a verb from the printed card; after which, he would be required to state (verbalize) the past tense form of the word. Many of the subjects, however, were unable to read the words in the present tense, and others were confused as to the meaning of the "past." An attempt to explain "past" by the examiner injecting the phrase "It happened yesterday," did not aid in evoking the desired responses. This lead to modifications identified as Pilot Test 2.

PILOT TEST 2 - The examiner read the present tense of the verb to the subject from the card and asked him to use it in a sentence. The subjects tended to make up sentences lacking the stipulated word, or seemed confused as to the meaning of the contrived sentence; thus, producing uninterpretable data.

As Pilot Tests 1 and 2 proved unsuitable procedures for having the EMH student communicate and demonstrate interpretable knowledge of the past tense of a word, the experimenter developed Pilot Test 3 as an alternative.

PILOT TEST 3 - This test was given approximately one and one-half weeks after the initial testing session. In test 1 and 2, a factor of the students' relative unfamiliarity with the examiner and an apparent nervousness in a test situation was observed. Test 3 procedures began by attempting to put the subjects at ease by giving each subject paper and crayons and asking him to draw a picture of himself doing anything he liked to do. When finished, the subject was asked by the examiner to describe some of the things he did on the previous day. The examiner listened, making mental note of the use of past tense verbs.

It was observed that in these verbal descriptions of the subjects' activities, the past tense was employed somewhat frequently and arbitrarily. A disregard for proper usage of the past tense form of words was especially marked in the descriptions given by black children.

Following the picture making and narrative interview, the examiner displayed a card bearing the present form of a verb and read

the word. The examiner then employed techniques used in the Distar Language Program (Science Research Associates, 1969) where children are supplied with a verbal unit and asked to imitate it as shown below.

EXAMPLE: The student was asked, "Did you dance yesterday?"

S_S "Yes." (If a NO answer is received, another verb was used.)

Examiner: "Say the whole thing."

S_S "Yes, I dance(d) yesterday."

The examiner noted the word form used in the second response. If the "ed" form was audible, the subject was scored as demonstrating knowledge of the past tense. All the verbs on the list were subsequently substituted for the underlined verb in the example above.

The limitation of this method were that the results were largely dependent on the examiner's auditory acuity and the clarity of enunciation on the part of the students. It was somewhat difficult to ascertain if S_S actually said the "ed" sound. If E was not sure, he would ask for a repeat of "the whole thing."

TABLE 1

FREQUENCY NUMBER OF STUDENTS DEMONSTRATING "ED" FORM CORRECTLY EMPLOYED

Stanwix Classification	Verbs	Caucasian N = 6	Ratio	Negro N = 4		Frequency Total	Rank
1 - A	HELP	6	1.0	3	.75	9	23.5
	JUMP	5	.83	2	.50	7	13
	LIKE	3	.5	0	0	3	6
	LOOK	3	.5	2	.5	5	11.5
	PLAY	5	.83	1	.25	6	14.5
	REST	2	.33	0	0	2*	2.5
	TURN	2	.33	0	0	2*	2.5
	WANT	1	.17	3	.75	4	.9
1 - B	ASK	3	.5	2	.5	5	11.5
	LAUGH	3	.5	1	.25	4	9
	LIVE	3	.5	0	0	3	6
	OPEN	3	.5	1	.25	4	9
	STOP	6	1.0	3	.75	9	23.5
	WALK	6	1.0	1	.25	7	18
	WORK	5	.83	1	.25	6	14.5
	CALL	6	1.0	1	.25	7	18
1 - C	CARE	2	.33	0	0	2*	2.5
	CLIMB	2	.33	1	.25	3	6
	COUNT	4	.67	2	.5	6	14.5
	CRY	5	.83	3	.75	8	21
	DANCE	5	.83	3	.75	8	21
	DROP	6	1.0	2	.50	8	21
	PAINT	5	.83	1	.25	6	14.5
	PICK	2	.33	0	0	2*	2.5
TOTALS						126	

DATA ANALYSIS

To test the hypothesis that there would be no difference between the levels of recognition and/or use of the present and past tense, the frequencies in Table 1 have been subjected to a Chi Square Test. Test 1 was based on total frequency of recognition of the present tense as the expected frequency, (= 10) and the observed frequency as shown in Table 1. It seems to be a violation of the normality function that suggests variance on both sides of the expected frequency to hold the expected frequency at a maximum (10) and expect no deviations except less than the maximum. An alternate would be to consider the mean as the expected frequency.

A second analysis (Test II) used the mean frequency as the expected frequency. The results of the tests are given in Table II.

Test I is significant, suggesting a significant deviation from the expected frequency greater than chance fluctuations. The non-significant Test II, however, indicates that there are no note-worthy deviations among the obtained frequencies from the mean that cannot be accounted for by chance.

TABLE IX

CHI SQUARE TEST FOR DIFFERENCES BETWEEN PRESENT AND PAST TENSE

LEVEL OF DATA	FREQUENCY	X^2	DF	
Test I Total Recognition of Present Tense				
Observed Frequency (Total Column Table I)	126	66.5	23	.05
Expected Frequency 24 x 10 (Maximum)	240			
Test II Mean Recognition of Present Tense				
Observed Frequency (Totals Column Table I)	126			
Expected Frequency 24 x 5.5 (Grand mean)	132	22.01	23	.05
Test III Total Recognition of 20 Present Tense				
Observed Frequency				
Expected Frequency 20 x 10 (Maximum)		41.60	19	.05
Test IV Mean Recognition of 20 Present Tense				
Observed Frequency				
Expected Frequency 20 x 5.9 (Grand mean)		12.51	19	.05

X^2 .05 with degrees of freedom indicated.

There are four verbs (test, turn, care, pick) which received listings with a low frequency of 2 each (and then only by caucasian children). It would seem safe to say that these verbs may not be used by many primary aged children in normal conversation. These words also have common noun meanings. Since the syntactic basis for including words in the original list is not known, it could be surmised that these words may not yet have been included in the subjects useful verb vocabulary domain. If these four words are omitted from the Chi Square

say the verbs are not from the same population. If one looks at the total ranks in Table III there seems to be a decided difference for 1-A in comparison to 1 - B and 1 - C with 1 - A being the more difficult (at least the these verbs are low in frequency).

To test the observed difference for Black children the frequencies were converted to ratios to account for differences of in cell size (6 for caucasian, 4 for negro). These were arranged in rank order and tested for difference using a Mann Whitney U for the hypothesis that past tense production is equal in both groups as shown in Table IV.

TABLE IV

MANN - WHITNEY U TEST FOR RACE DIFFERENCES

GROUP	0	.17	.25	.33	.5	.67	.75	.83	1.0	U
Caucasian		1		5	6	1		6	5	
Negro	6		8		5		5			
Value of Rank	3.5	7	11.5	18	20.5	32	35	40.5	45.5	
Computation										
Caucasian		7.		90.	123.	32		243	227.5	103.5
Negro	21		92.		102.5		175			485.5

For groups over 20 the U distribution approaches a normal distribution with zero mean and unit variance. The probability associated with the occurrance of H_o is determined by an observed z and assumed for rejection at $p = .05$ (Seigel, page 12, 1956). The observed z for Table IV is 4.07 and its probability

analysis (Test III and IV, Table II) the decision about the null hypothesis remains the same as for Test I and II respectively.

The differences between vocabulary level as arranged in the Stanwix House List was tested by arranging the frequencies of Table I in rank order by level value as shown in the extreme right column and subjected to a Kruskal - Wallis one-way analysis of variance using the statistic H to test the hypothesis that the levels are from the sample population, (See Table III).

TABLE III

KRUSKAL - WALLIS H TEST FOR VERB DIFFERENCES BETWEEN VOCABULARY LIST LEVELS

	RANKS BY LEVELS		
	1 - A	1 - B	1 - C
	23.5	11.5	2.5
	18.	9.	6.
	6.	6.	14.5
	11.5	9.	21
	14.5	23.5	21
	2.5	18.	21.
	2.5	14.5	14.5
	9.	18.	2.5
TOTAL	87.5	109.5	103.

$$H = \frac{12}{24(25)}\left(\frac{87.5}{8} + \frac{109.5}{8} + \frac{103}{8}\right) - 3(25)$$

$$= 74.26$$

For cell sizes over 5, the H statistic is distributed as Chi Square with K-1 degrees of freedom and for Table III the critical value at $p = .05$ for two degrees of freedom is 5.99. We must therefore reject the null hypothesis and

is greater than .0001. Thus one must conclude that there is a significant race difference apparent in the data.

DISCUSSION

Dillard (1972) claims that the Black child has no concept of past tense and that Black English has no tenses. Houston (1970) takes an opposing linguistic view in stating that the Black child does not pronounce the "ed" at the end of words not because his language has no tenses but because he is following a phonological rule of Black English. This rule is much like the one allowing a white speaker to omit the "d" in "good morning." Whatever position is taken, there seems to be support in this study for the fact that Black children tended not to audibly pronounce the "ed" for past tense; yet, they seem to be more able to produce it under the "Distar type" discussion of Pilot Test 3. These same children seemed also able to conceptualize the meaning of past tense when describing their activities "yesterday", although the pronounciation may not have been audible to the experimentor.

The fact that the children seemed to respond somewhat better to the two higher of the three levels of words (as classified by Stanwix House and verified by Lewis) may suggest that the subjects may have mastered the list through the level of I-C. Tudyman and Groelle (1958) suggest level I as being essentially primary level and the mean mental age of the subjects, at 6.5 years would suggest that they were functioning at this level. The specific verbs in level I-A may tend to be

most useful in their present tense and less used by primary children in the past tense. Level 1-B and 1-C seem to suggest a more equal use of present and past tense thus giving some support to the conclusion that children of primary level seem to be able to use the past tense of verbs near the level established for the present tense. The evidence presented in this study suggests that the practice of assuming the past tense form of a word is at least equal to the level of the present in the Stanwix House List.

IMPLICATIONS

The study should be replicated with particular attention to: 1) the mental age of the subjects which needs to be lower to test the notion that the present and past are equally recognized, and 2) visual recognition of the words in both the present and past tense which needs to be tested to see if the subject visually associates the two forms of the word.

A third investigation needs to be made into the racial differences found in this study. Of particular interest would be to investigate whether the Black reproduction of the past tense in written work made use of the past tense spelled with the 'ed' ending

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