IDENTIFICATION OF LEARNING DISABLED STUDENTS IN FORT CAMPBELL SCHOOLS ACCORDING TO KENTUCKY SEVERE DISCREPANCY GUIDELINES

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To the Graduate and Research Council:

I am submitting herewith a Field Study written by Eileen Haley Schellhammer entitled "Identification of Learning Disabled Students in Fort Campbell Schools According to Kentucky Severe Discrepancy Guidelines." I have examined the final copy of this paper for form and content, and I recommend that it be accepted in partial fulfillment of the requirements for the degree Education Specialist, with a major in Education.

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An Abstract

Presented to the

Graduate and Research Council of

Austin Peay State University

In Partial Fulfillment

of the Requirements for the Degree

Education Specialist

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by

Eileen Haley Schellhammer

May 1988

ABSTRACT

This study was conducted to determine whether students classified and served in special education programs as learning disabled in the Fort Campbell School System met the guidelines for determining severe discrepancy between aptitude and achievement that were established by the Kentucky Department of Education in 1985.

The study found that approximately 50% met the established guidelines; there was no significant difference between those identified as learning disabled in Kentucky compared to those identified out-of-state. The study found the Standard Score Comparison method to be more practical in the identification of LD students than the Regression Estimated True Score Formula.

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CHAPTER 1

Introduction

The concept of learning disability (LD) was first described in the literature by Kirk and Bateman (1962, p. 73) who referred to the condition as a "retardation, disorder, or delayed development" in specific school skills or subjects, "resulting from possible cerebral dysfunction and/or emotional or behavioral disturbances." Other definitions emerged in the literature between the mid-1970's and mid-1980's. In a study which surveyed the current definitions, Elksnin (1984) concluded that when LD was thought to result from "within-child" problems, definitions included attempts to explain underachievement by psychological or neurological processing deficits. But when LD was regarded as a category of underachievement, it was defined in terms of the academic deficit.

The primary components of prevailing LD definitions were contained in the Federal definition of LD presented in PL 94-142, the Education for All Handicapped Act. The definition stated:

> Children with specific learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include

conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunctions, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance or to environmental disadvantage (United States Office of Education, 1977, p. 65083).

Within a year after passage of the law, the Office of Education (1979) estimated that 3% of the school age population was LD. The number of students identified as LD has increased dramatically since that time in spite of declining school enrollments (U.S. Department of Education, 1984). Figures cited by Frankenberger and Harper (1987) and Sigmon (1985) indicated a 119% increase in the seven year period following the passage of PL 94-142. Figures cited by the Human Services Research Group (1985) indicated that 4.57% of the 1983-84 national school enrollment was classified as LD; further, the group classified as LD was 41.73% of all served as handicapped. This represented an increase in percentage since the 1980-81 school year, when 36% of the handicapped was classified LD (Government Accounting Office, 1981).

Review of the Literature

Despite the annual publication of LD statistics, confusion regarding how to identify a child as learning

disabled dominates the literature. This is partially a result of the federal government's failure to provide identifying criteria in the legislation. Instead, accompanying the federal definition were procedural guidelines as follows:

> A team may determine that a child has a specific learning disability if: (a)(1) the child does not achieve commensurate with his or her age and ability in one or more of the areas listed in paragraph (a)(2) of this section, when provided with learning experiences appropriate for the child's age and ability levels; and (2) the team finds that a child has a severe discrepancy between achievement and intellectual ability in one or more of the following areas: oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculation, or mathematics reasoning. (b) The team may not identify a child as having a specific learning disability if the severe discrepancy between ability and achievement is primarily the result of: a visual, hearing or motor handicap; mental retardation; emotional disturbance; or environmental, cultural or economic disadvantage (U.S. Office of Education, 1977, p. 65083).

The determination of a severe discrepancy between ability and achievement became the common denominator for LD classification, and state departments of education gradually

adopted guidelines to determine severe discrepancy. In the 1981-82 school year, 33% of the states had adopted guidelines; this number increased to 57% by the 1985-86 school year (Frankenberger and Harper, 1987).

Despite federal guidelines and state legislated criteria, many researchers have found that substantial percentages of children served as LD do not show a severe ability-achievement discrepancy in test scores. Epps, McGue & Yesseldyke (1982) found little agreement among assessment professionals and between the professionals and school personnel as to LD identification when presented with identical case studies. Valus (1986) found one-third of students placed in LD programs did not exhibit the state's criteria for severe discrepancy. Shepard, Smith and Vojir (1983) found only 20.5% of students exhibiting the state severe discrepancy criteria, although about half exhibited characteristics consistent with the definition of LD in the federal guidelines.

The literature generally describes four basic methods of determining discrepancy between ability and achievement: (a) deviation from grade level, (b) expectancy formulas, (c) standard score comparison, (d) regression analysis.

The deviation from grade level approach identifies pupils who are functioning below grade placement. This method generally uses grade equivalent scores and has been most often used for the identification of reading

disabilities (Cone and Wilson, 1981). The method may specify how many months or years behind one must be to be considered LD. For example, a child functioning one year behind in reading in first grade may be considered LD while a child one year behind in eleventh grade may not be considered LD. Disadvantages of this method include its tendency to identify slow learners as LD (Shepard, 1980) and to underidentify pupils with higher IQ's (Cone and Wilson).

Expectancy formulas determine the expected academic functioning by an equation using mental age and chronological age. One method researched in the literature is the Bond & Tinker method (1973) which utilizes mental age and IQ in a formula that results in a reading grade expectancy. It tends to overidentify slow learners as LD (Cone and Wilson, 1981) and mistakenly uses the IQ score as if it were a ratio scale of measurement (Shepard, 1980).

Frequently cited in the literature (Elliott, 1981; Elksnin, 1984; Shepard, 1980) is the Harris Reading Expectancy Formula (Harris, 1975) which incorporates mental age and chronological age as essential components. This formula was recommended by the U.S. Office of Education as a suggested tool for quantifying severe discrepancy (Cone and Wilson, 1981). But problems with the formula include its tendency to overidentify those in the IQ range 80-90 and children under age eight (Cone and Wilson; Elliott).

In the standard score comparison method standard scores

of ablity and achievement tests with the same mean and standard deviation are compared. Devised by Hanna, Dyck and Holen (1979) the method was considered an improvement over the others since it could be subjected to arithmetic calculations and comparisons could be made across tests, subtests, and age or grade levels. The predetermined standard deviation difference (1.0, 1.5 or 2 SD) results in different numbers of students identified. Wilson and Cone (1984) determined that if a severe discrepancy criterion was set at one standard deviation difference, it would identify about 16% of the school age population as LD.

Advantages of the standard score comparison method include ease of calculation and a large variety of achievement tests. Disadvantages include its failure to address measurement error, regression toward the mean, or number of years a child is in school (Cone and Wilson, 1981). Hanna et al. (1979) suggested, however, the latter problem could be corrected by using grade-based rather than age-based scores. In a study for the U.S. Department of Education, Reynolds (cited in Valus, 1986) rejected the Hanna et al. model, reporting the standard score comparison method results in eligibility bias thus identifying as LD more children with average IQ's. Further criticism was levied by Braden (1987) who found the standard score comparison method to produce a disproportionate representation of racial minority pupils among those

classified as LD.

The regression analysis method is based on the statistical principle that extreme scores on one measure will be less extreme on a second related measure. The magnitude of the regression toward the mean depends on the strength of the correlation between the achievement and ability measures. It involves determining empirical regression lines of the expected achievement; then a cutoff line is determined. This method requires that aptitude and achievement tests be normed together for the school district or larger locale. Further, a probability level is established to identify a pre-determined percentage of the population. Cone and Wilson (1981) promote this as the best method of quantifying a severe discrepancy between aptitude and achievement. Other researchers agree because it identifies pupils from the full ability continuum (Shepard, 1980), it is more equitable to minorities (Braden, 1987), and it allows a district to anticipate the incidence of LD.

The use of discrepancy formulas to determine eligibility for learning disability services has recently been opposed by the Board of Trustees of the Council for Learning Disabilities (Council for Learning Disabilities, 1986) for these reasons:

1. Formulas tend to focus on a single aspect of learning disabilities, such as reading;

2. Technically adequate instruments are not available

for all areas of learning disabilities;

3. Some qualifying instruments lack adequate reliability and validity;

4. Services are denied if the score difference does not meet the district criteria;

5. Discrepancies may exist for reasons other than learning disabilities;

6. Formulas create a false sense of objectivity;

7. Formulas are often the sole criterion for determining eligibility;

8. Formulas are often used to reduce incidence rates.

To counteract the aformentioned problems, the Board recommended a phase out of discrepancy formulas to determine learning disability eligibility; instead, a comprehensive diagnostic evaluation would be used to assess all areas of learning disabilities. The Board supported alternate programming for those misdiagnosed as LD. When formulas are mandated by state agencies, it was recommended the formula be viewed as only one source of information to determine a learning disability.

The Problem

The Commonwealth of Kentucky regulated programs for children with specific learning disabilities, effective in 1981.

In 707 KAR 1:056, procedures were stated as follows:

An admissions and release committee shall determine that

a child has a specific learning disability provided the following eligibility criteria are met: (a) the child does not achieve commensurate with his or her age and ability levels when provided with learning experiences appropriate for the child's age and ability levels; (in one or more of the seven areas listed): oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculation, mathematics reasoning. (b) The child has a severe discrepancy between achievement and intellectual ability in one or more of the seven areas listed (Kentucky Administration Regulations, 1987, p. X-1).

Further guidelines state that a written report by the evaluation team should determine whether a severe discrepancy between achievement and ability is present for which special education services are needed.

Information regarding the identification process was not published until 1984 with the issuance to assessment professionals of Guidelines for Identifying Children and Youth with Specific Learning Disabilities (Kentucky Department of Education, 1984) followed by Identifying Children and Youth with Specific Learning Disabilities: Aptitude-Achievement Discrepancy (Kentucky Department of Education, 1985).

The method of determining severe discrepancy endorsed in the latter publication was the Regression Estimated True

Score method (RTS), which appears to be a merger of the standard score comparison and regression analysis methods as defined by Cone and Wilson (1981). This formula (see Appendix A) involves the determination of the best estimates of the pupil's true scores by correcting for errors in measurement. Unlike a true regression anaylsis, the correlations are computed between the aptitude and achivement tests using specific published tests which have correlational data reported in the technical manuals. Similar to regression analysis, it determines a cutoff point to comply with an incidence factor of 4%. Although it accounts for regression toward the mean by reducing probability of severe discrepancy by measurement error, it does not account for the main source of regression which is due to the inherent relationship between aptitude and achievement (Cone and Wilson). Tables representing the computation of the formula are included in the Aptitude Achievement publication (1985).

The Kentucky Department of Education acknowledged the limits of utilizing the RTS, and provided an alternate method of determining discrepancy, a Standard Score Comparison method. This follows the recommendation of Cone and Wilson (1981) for states to endorse supplemental standard score comparison procedures when the regression method does not apply. Kentucky's standard score comparison guidelines indicate that a severe discrepancy exists if there is a 22 point (<1.5 standard deviation) difference

between aptitude and achievement test scores. Like the original Hanna et al. (1979) method, the standard score method requires practitioners to use age normed scores. Unlike the Hanna et al. model, which recommended the use of the Verbal IQ score as the aptitude score, the Kentucky method allows professional judgement of the examiner to determine which score to use under the following conditions: (a) if there is a 15 point difference between the Verbal and Performance scale scores of the Wechsler Intelligence Scale for Children-Revised, the higher score may be used; (b) if there is a 19 point difference between the Simultaneous and Sequential Processing scales of the Kauffman Assessment Battery for Children, the higher score may be used.

The Fort Campbell, Kentucky, School District serves military dependents living on the Fort Campbell army base and is funded by the U.S. Department of Defense. By nature of its constituency, it serves a transient population. It is estimated that one-third of the school population changes within any given school year which suggests a total population change in three year intervals (Fred B. Newton, personal communication, February 1, 1988). This phenomenon implies that the population served in special education is as transient as the regular population. Within any given school year there may be a one-third change in those served as learning disabled. It is, therefore, conceivable that many children enter the Fort Campbell system who have been

identified as learning disabled in another location. It is also conceivable that a child identified elsewhere may not meet the Kentucky eligibility criteria.

The purpose of this study is to determine the identification criteria of the population currently served as learning disabled in the Fort Campbell School District as they relate to the guidelines endorsed by the Commonwealth of Kentucky. It will be modeled after studies which have investigated and compared methods of severe discrepancy determination (Elksnin, 1984; Valus, 1986). Specifically, this study will determine whether children in the Fort Campbell system meet Kentucky guidelines related to severe discrepancy between ability and achievement. The following hypotheses will be investigated:

1. Fort Campbell students identified in other states do not meet Kentucky severe discrepancy guidelines for classification as learning disabled.

2. Fort Campbell students identified in other Kentucky school districts do meet Kentucky severe discrepancy guidelines for classification as learning disabled.

3. Fort Campbell students identified within the Fort Campbell system do meet Kentucky severe discrepancy guidelines for classification as learning disabled.

4. The Standard Score Comparison method identifies more students as learning disabled than the Regression Estimated True Score Discrepancy Formula method.

5. The Regression Estimated True Score discrepancy method has limited practicality for identifying students as learning disabled.

CHAPTER 2

Methodology

Subjects

Subjects for this study were pupils identified and served as LD in the Fort Campbell, Kentucky, School District. Data were collected on February 1, 1988. On that date 3,975 pupils were enrolled; 148 pupils (3.89% of the total population) were coded and served with special education services as LD.

Procedure

Permission to review files of pupils coded learning disabled was sought of and granted by Fred B. Newton, Director of Instruction, Fort Campbell Schools. Confidentiality was guaranteed by assuring no names or other information which could be potentially hazardous to a student or to the Fort Campbell schools would be used.

The following information was collected from the files: locale of assessment (Fort Campbell, other Kentucky districts, out-of-state), chronological age at assessment, aptitude test name and scores, achievement test name and scores.

The aptitude tests include the Wechsler Intelligence Scale for Children-Revised (WISC-R), the Kauffman Assessment Battery for Children (K-ABC), and the Stanford Binet Intelligence Scale-Fourth Edition (SB-IV). WISC-R scores include the Verbal Scale, Performance Scale and Full Scale.

The K-ABC includes Sequential Processing, Simultaneous Processing, and Multiple Processing Composite scores. The SB-IV Composite Standard Age Scores were used. The WISC-R and the K-ABC tests are reported in standard scores with a mean of 100 and standard deviation of 15; the SB-IV has a mean of 100 and standard deviation of 16.

The primary achievement tests included in this study were the Woodcock-Johnson Psychoeducational Battery Tests of Acheivement (W-J), the Wide Range Achievement Test-Revised (WRAT-R), and Kauffman Assessment Battery for Children Achievement Tests (K-ABC). Scores from the reading, mathematics, and written language or spelling sections of the tests were collected.

The decision of whether a student met the Kentucky Standard Score Comparison method of determining a severe discrepancy was made by subtracting the lowest achievement subtest score from the ability test score as follows: (a) the lowest achievement subtest score was subtracted from the Full Scale WISC-R score, the Multiple Processing K-ABC score or the SB-IV Composite Standard Age score. If there was a 22 point difference, the pupil was listed as having met the Kentucky severe discrepancy guideline. (b) If the student did not meet the 22 point discrepancy by considering the composite score of the ability test, then the difference between the Verbal and Performance scales of the WISC-R or between the Simultaneous and Sequential Processing scores of

the K-ABC was computed. If there was a 15 point difference in the scales of the WISC-R or a 19 point difference in the scales of the K-ABC, the achievement test score was subtracted from the higher score. If there was a 22 point difference, the pupil was listed as having met the Kentucky severe discrepancy guideline.

The determination of whether a pupil met the Regression Estimated True Score (RTS) method was made by consulting the tables in the Guidelines for which the formula had been computed. Tables for the following test pairings are published: (a) K-ABC and KeyMath Diagnostic Arithmetic Test and/or Woodcock Reading Mastery Test Passage Comprehension subtest; (b) WISC-R and Keymath Diagnostic Arithmetic Test, Wide Range Achievement Test for ages 8-11 and 17-18, W-J for ages 8-11 and 17-18, and Woodcock Reading Mastery Test total score. Tables are also provided for the Woodcock-Johnson Test of Cognitive Ability with KeyMath, WRAT for ages 8-11 and 17-18, W-J for ages 5-11, 13-14, and 17-18, and the Woodcock Reading Mastery Test. But this latter test pairing was not used in this study because the Woodcock-Johnson Test of Cognitive Ability is not approved by the Kentucky Department of Education for learning disability determination.

The data were collected, then tabulated and analyzed by locale of assessment, age at assessment, test pairings, Kentucky Standard Score Comparison guidelines, and

Regression Estimated True Score guidelines. The level of statistical significance was determined by Chi Square analysis.

CHAPTER 3

Results

Records of the pupils were tabulated according to location of assessment. Table 1 illustrates the results. Slightly less than two-thirds (63.5%) of the pupils were identified at Fort Campbell, three pupils (2%) were identified at other Kentucky districts, and approximately one-third (34%) were identified out-of-state. Since there were so few pupils identified in other Kentucky districts, this group was combined with the Fort Campbell group for further analyses.

Records were tabulated by location of assessment according to whether they met the Kentucky severe discrepancy guidelines by the Standard Score Comparison method. Table 2 summarizes the results. Of the 148 pupils in the study, 79 (53.4%) met the 22 point standard score discrepancy, 47 (31.7%) did not meet the discrepancy, and 22 (14.9%) had incomplete information. Of those identified at Fort Campbell/Kentucky, more than one-half (55.7) met the severe discrepancy guidelines, whereas over one-third (37.1%) did not. Seven percent had incomplete information.

Of those pupils identified out-of-state, slightly less than one-half (49%) met the discrepancy guidelines, over one-fifth (21.6%) did not meet the discrepancy guidelines, and 29% had incomplete information. The Chi Square method of determining statistical significance was calculated among

the groups and it was determined there was no significant difference among those identified at Fort Campbell and those identified elsewhere as to meeting the severe discrepancy guidelines by the Standard Score Comparison method.

The difference among the aptitude and achievement test scores of the 47 pupils who did not meet the 22 point discrepancy was then considered. Table 3 gives the score differences of this group. Of this group, 40.4% had a score difference between 1 and 1.5 standard deviation difference (15-21 points), 36% were between .5 and 1 standard deviation difference (8-15 points), and 23.4% had 0 to .5 standard deviation difference (0-8 points).

To determine whether pupils had met the severe discrepancy guidelines by the Regression Estimated True Score (RTS) model, consideration of age at assessment and test pairing was necessary. Results indicating age at assessment are illustrated in Table 4. The number of students who were within the age range for applying the RTS formula (ages 8-11 and 17-18) was 83, which represents 56.1% of the total population.

All records were tabulated according to the test pairings to further determine the potential pool for applying the RTS formula. Table 5 lists the pairings. It was determined that no students were identified using the KeyMath Diagnostic Arithmetic Test or the Woodcock Reading

Mastery Test, two of the achievement tests for which tables are provided. It was also determined that the test pairing of the WISC-R and Wide Range Achievement Test (WRAT), for which tables are provided, was of little use since all but two assessments using a WRAT had used the WRAT-R for which no tables are provided in the guidelines.

The potential pool, therefore, included the 59 students whose pairings consisted of the WISC-R and W-J or the WISC-R and WRAT. Ages and test pairings were then compared and it was determined that 37 pupils (24.9%) had the test pairing and the proper ages. This group is represented in Table 6 which illustrates the group for which the RTS could be applied. Of the 37 cases, 25 pupils met the severe discrepancy guideline by the RTS formula. This represents 16.9% of all those pupils classified as LD.

Table 7 summarizes the data for all pupils as to whether they met the severe discrepancy guidelines endorsed by the Kentucky Department of Education. All who met the severe discrepancy guidelines by the RTS model also met the guidelines by the Standard Score Comparison method. Likewise, all who were eligible but did not meet discrepancy by the RTS model also did not meet it by the Standard Score discrepancy method. Thus, the RTS identified no more or fewer students who were eligible because of age and test pairing than the Standard Score Comparison.

Table 1

Location of Assessment of LD Students

Location	Number	Percentage
Fort Campbell	94	63.5
Other Kentucky	3	2.0
Out-of-State	51	34.5

Table 2

LD Pupils Meeting Criteria by Standard Score Comparison Method

Location of Assessment	Qualified		Not Qualified		Incomplete Data	
	No.	%	No.	%	No.	%
Fort Campbell	54	55.7	36	37.1	7	7.2
Out-of-State	25	49.0	11	21.6	15	29.4
TOTAL	79		47		22	
% of Total LD		53.4		31.7		14.9

Table 3

Score Difference of LD Students Not Meeting 22 Point Severe Discrepancy Guideline

Location of Assessment	15-21 points (1-1.5 SD)	8-15 points (.5-1 SD)	0-8 points (0-0.5 SD)
Fort Campbell	11	15	10
Out-of-State	8	2	1
Percentage of Total	40.4%	36.2%	23.4%

Table 4

Age of Assessment of LD Students

Age	Number	Percentage
5	5	3.4
6	8	5.4
7	21	14.2
8	25	16.9
9	19	12.8
10	23	15.5
11	15	10.1
12	12	8.1
13	7	4.7
14	3	2.0
15	7	4.7
16	2	1.4
17	0	0.0
18	1	0.7

Table 5

Aptitude - Achievement Test Pairings of LD Students

Aptitude	Achievement	Number
K-ABC	K-ABC	3
K-ABC	W-J	5
K-ABC	WRAT-R	4
SB-IV	WRAT-R	5
WISC-R	K-ABC	1
WISC-R	W-J	57
WISC-R	WRAT	2
WISC-R	WRAT-R	42
WISC-R	other	7
Incomplete data		22

Table 6

Severe Discrepancy Determination by RTS Formula

Test Pairing	Number	% of Total LD
WISC-R & WJ ages 8-11; 17-18	35	23.6
WISC-R & WRAT ages 8-11; 17-18	2	1.3
Eligible for RTS Formula	37	24.9
Meet discrepancy by RTS Formula	25	16.9

Table 7

Summary of LD Students Meeting Kentucky Severe Discrepancy Guidelines

Classification	Number	% of Total
Incomplete Data	22	14.9
Meet neither method	47	31.8
Meet Standard Score method only	54	36.5
Meet Standard Score and RTS method	25	16.9
Meet RTS method only	0	0

CHAPTER 4

Discussion

The purpose of this study was to determine whether Fort Campbell pupils classified and served as LD met the Kentucky aptitude-achievement discrepancy guidelines as they were published in 1985. The study was also to determine whether there was a difference in those meeting the guidelines depending upon location of assessment. Further, the study aimed to investigate the practicality of methods of determining severe discrepancy endorsed by the Kentucky Department of Education.

One of the first assumptions in the design of this study was the approximate one-third annual turnover of Fort Campbell pupils. Results of this study supported the assumption because slightly more than one-third of the pupils served in the school year under investigation were identified outside Fort Campbell.

It had been expected that a considerable number of pupils would have been identified as LD in other Kentucky school districts. Only 3 of the 148 pupils were identified in other Kentucky districts, suggesting little transfer into the Fort Campbell school system from other Kentucky school districts.

The major hypothesis of this study was that pupils identified at Fort Campbell or in other Kentucky districts would meet the published Kentucky aptitude-achievement

discrepancy guidelines. There was no significant difference in identification patterns among those identified at Fort Campbell compared to those identified out-of-state. Thus, the hypothesis is rejected.

A little over half the pupils met the 22 point discrepancy endorsed by the Kentucky Department of Education. Slightly less than one-third of the pupils in this study (31.7%) did not meet the discrepancy guidelines. This is comparable to the study of Valus (1986) that found one-third of the LD placed students did not meet the Colorado endorsed discrepancy guidelines. It differed from the Shepard, Smith and Vojir study (1983) which found that 80% of the cases did not meet the state mandated guidelines.

Among the students who did not meet the 22 point discrepancy, approximately 60% showed a 15 point or less discrepancy. This suggests that the Fort Campbell system places students in LD services based upon other criteria discussed at the admission and release committee meeting which is consistent with the policy of the Council for Learning Disabilities (1986). Examination of the files of this group revealed many were classifed as LD when they could have been classified in another category of exceptional student status, such as physically handicapped or educable mentally handicapped. Thus, the numbers reflecting LD status are somewhat misleading.

Results of this study showed 14.9% of the pupils were

placed in LD programs with incomplete qualifying data. Examination of incomplete files revealed there were missing aptitude or achievement tests or else test results were reported in percentile or grade equivalent scores which prevented a standard score comparison. In some cases a statement of previous classification as LD may have been provided in school records and placement made pending receipt of complete records. This practice represents acknowledgement of the transient nature of the population. However, this practice could distort the statistics of special education recipients reported to state and federal agencies.

The Regression Estimated True Score formula was of little use in determining severe discrepancy. Its use was limited by the age of the pupils and by the publication of tables for only a few test pairings. During the course of this study, the formula computation was attempted on a random sample of cases. But it was discovered that correlation data, as required by the formula, are not routinely provided in test administration and technical manuals; even when correlation data are provided, such as for the SB-IV and WRAT-R, the data are likely to be provided for selected age groups which prevents routine application. The computation of the formula, even if all the data are provided in test manuals, requires considerable time and offers several opportunities for computation error. It is,

therefore, unlikely that assessment professionals would routinely attempt the formula computation.

When examining the aptitude-achievement guidelines, it was further discovered that test pairings for which tables are provided are out of date. The Wide Range Achievement Test has been revised since the tables were published, resulting in useless WRAT tables. In this study only two cases had used the WRAT, whereas 42 cases had used the WRAT-R. Within the past year, a revised Woodcock Reading Mastery Test has been published, so practitioners will no longer be able to use the WRMT tables if they use the revised test. Notice has also recently been issued that the KeyMath Diagnostic Arithmetic Test will soon be published in a revised form warranting the KeyMath tables useless in the near future. It appears the only practical use of the tables is when using the K-ABC or WISC-R paired with the W-J. So despite its statistical superiority (Cone and Wilson, 1981), the regression method has shown no practical value. Further, in this study there was no difference among those students identified using the formula from those who could be identified using the standard score comparison method.

Implications for the Future

This study suggests that the standard score comparison method is superior to the RTS method in identifying LD students in Kentucky because it could be applied in all

cases that had aptitude and achievement tests reported in standard scores, whereas the RTS method could only be used when cases had certain ages and certain test pairings. If the RTS method is to be endorsed in future Kentucky publications, it will be necessary for the state to provide updated tables useful for all ages.

The Fort Campbell school system may wish to create a code designation for pupils placed in special education as LD on a temporary basis; then, when records are complete, the regular LD coding would be made. This would provide more accuracy in reports.

Additional research should be made on both Kentucky methods of determining severe discrepancy to see if they are consistant with other states' guidelines and to see if they are in accordance with current philosophy of major groups which support the concerns of the learning disabled population.

BIBLIOGRAPHY

Board of Trustees of the Council for Learning Disabilities. (1986). Use of discrepancy formulas in the identification of learning disabled individuals: a position statement. Learning Disability Quarterly, 9, 245.

Bond, G. L., & Tinker, M. A. (1973). Reading difficulties: their diagnosis and corrections (3rd ed.). New York: Appleton-Century-Crafts.

Braden, J. P. (1987). A comparison of regression and standard score discrepancy methods for learning disability identification: effects on racial representation. Journal of School Psychology, 25, 23-29.

Cone, T. E., & Wilson, L. R. (1981). Quantifying a severe discrepancy: a critical analysis. Learning Disability Quarterly, 4, 359-371.

Elksnin, L. A. (1984). A comparison of four quantitative methods for determining severe discrepancy and school LD placement decisions. (Doctoral dissertation, University of Virginia, 1984). Dissertation Abstracts International, 46(10-A), 2994-2995A.

Elliott, M. (1981). Quantitative evaluation procedures for learning disabilities. Journal of Learning Disabilities, 14, 84-87.

Epps, S., McGue, M., & Ysseldyke, J. (1982). Interjudge agreement in classifying students as learning disabled. Psychology in the Schools, 19, 209-220.

Frankenberger, W., & Harper, J. (1987). States' criteria and procedures for identifying learning disabled children: a comparison of 1981/82 and 1985/86 guidelines. Journal of Learning Disabilities, 20, 118-120.

Government Accounting Office. (1981). Report to the chairman, subcommittee on select education, committee on education and labor, house of representatives: disparities still exist in who gets special education. Washington, D.C.: Author.

Hanna, G. S., Dyck, N. J., & Holen, M. C. (1979). Objective analyses of achievement-aptitude discrepancies in LD classification. Learning Disabilities Quarterly, 2, 32-38.

Harris, A. (1975). How to increase reading ability. (5th ed.). New York: McKay.

Human Services Research Institute. (1985). Summary of data on handicapped children and youth. Washington, D.C.: U. S. Government Printing Office.

Kentucky Department of Education. (1984). Guidelines for identifying children and youth with specific learning disabilities. (Available from Office of Education for Exceptional Children, Kentucky Department of Education, Frankfort, Kentucky).

Kentucky Department of Education. (1985). Identifying children and youth with specific learning disabilities: aptitude-achievement discrepancy. (Available from Office of Education for Exceptional Children, Kentucky Department of Education, Frankfort, Kentucky).

Kentucky Department of Education. (1987). Kentucky administrative regulations. (Available from Office of Education for Exceptional Children, Kentucky Department of Education, Frankfort, Kentucky).

Kirk, S. A., & Bateman, B. (1962). Diagnosis and remediation of learning disabilities. Exceptional Children, 29, 73-78.

Shepard, L. (1980). An evaluation of the regression discrepancy method for identifying children with learning disabilities. Journal of Special Education, 14, 79-91.

Shepard, L. A., Smith, M. L., & Vojir, C. P. (1983). Characteristics of pupils identified as learning disabled. American Education Research Journal, 20, 309-331.

Sigmon, S. B. (1985). American sociohistorical roots of learning disabilities: a foundation for radical analysis. Manuscript submitted for publication. Irvington, N. J. (ERIC Document Reproduction Service No. ED 275090).

United States Office of Education. (1977). Federal Register, 121.a1.541, 65083.

United States of Education. (1979). Progress toward a free appropriate education: a report to congress on the implementation of PL 94-142; the education for all handicapped act. Washington, D.C.: U. S. Department of Health, Education and Welfare.

United States Department of Education. (1984). Executive summary, 6th annual report to congress on the implementation of PL 94-142: the education for all handicapped children. Exceptional Children, 51, 199-202.

Valus, A. (1986). Achievement-potential discrepancy status of students in LD programs. Learning Disability Quarterly, 9, 200-205.

Wilson, L. R., & Cone, T. (1984). The regression equation method of determining academic discrepancy. Journal of School Psychology, 22, 95-110.

Regression Estimated True Score formula:

A discrepancy exists if:
(Regression estimate of true difference) is greater than 1.75 multiplied by the (standard deviation of the regression estimate of the true difference)

The formulas are:

$$\hat{\Delta} > Z_a \quad S\hat{\Delta}$$

$$\hat{\Delta} = b_{\text{Ach.Apt}} (\text{Ach} - 100) + b_{\Delta\text{Apt. Ach}} (\text{Apr.} - 100)$$

$$b_{\Delta\text{Ach.Apt}} = \frac{r - r_{\text{Apt}} \quad r - r_{\text{Ach}} \quad + r^2}{1 - r^2}$$

$$b_{\Delta\text{ Apt.Ach}} = \frac{r_{\text{Apt}} - r^2 - r + r_{\text{Ach}}\, r}{1 - r^2}$$

$$S\hat{\Delta} = 15\sqrt{b^2_{\Delta\text{ Ach.Apt}} = b^2_{\Delta\text{ Apt.Ach}} = 2(b_{\Delta\text{ Ach.Apt}})\,(b_{\Delta\text{ Apt.Ach}})(r)}$$

Where:

$\hat{\Delta}$ = Regression estimate of true discrepancy

$S\hat{\Delta}$ = Standard deviation of the regression estimate of true discrepancy

Z_a = Criterion level from a table of Z values

$b_{\Delta\text{Ach.Apt}}$ = Regression weight for achievement score

$b_{\Delta\text{Apt.Ach}}$ = Regression weight for aptitude score

r = Validity correlation coefficient between aptitude and achievement tests

r_{Apt}= The reliability coefficient of the aptitude test

r_{Ach}= The reliability coefficent of the achievement test