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ABSTRACT

This study compared the written products of four groups of 26 male students in grades 4-6, including 8 students identified as gifted, 6 learning-disabled/gifted, 6 learning-disabled, and 6 normal. The Test of Written Language-2 was administered and seven subtest scores were compared among the four groups. In general, the speculation that learning-disabled/gifted students would show similarities to both gifted and learning-disabled students was only partially supported. The groups showed differences on four subtests (contextual style, vocabulary, spelling, and style) but did not show differences on thematic maturity, contextual vocabulary, and contextual spelling. (Includes approximately 45 references.) (JDD)

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Written Language in Exceptional Male Elementary School Children: A Comparative Analysis of the Learning Disabled/Gifted.[1]

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Abstract. This study compares the written products of four different groups of 24 male students identified as either Gifted (**G**, n=8), Learning Disabled/Gifted (**LD/G**, n=6), Learning Disabled (**LD**, n=6), or Normal (**N**, n=6). The Test of Written Language-2 (TOWL-2) was administered and seven subtest scores were compared among these four exceptionality groups. In general, the speculation that LD/G students would show similarities to both G and LD students was only partially supported. One-way ANOVA's of the seven subtests obtained four which had significant ($p<.05$) differences among the four groups on Contextual Style, Vocabulary, Spelling and Style subscales. These findings partially support predictions based on the assumption that conceptual abilities of Learning Disabled/Gifted children are similar to those of the Gifted and Learning Disabled. These findings also partially support earlier research findings of Fox et. al., (1984) and Ganshow (1985).

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Written Language in Exceptional Male Elementary School Children: A Comparative Analysis of the Learning Disabled/Gifted.

INTRODUCTION. This study compared the written products of a group of students who were identified as Gifted (G), Learning Disabled/Gifted-like (LD/G), Learning Disabled (LD) and Non-Learning Disabled/Non-Gifted (N). The idea for this paper arose from a current dilemma in special education today. There appear to be strategies to remediate weakness of LD students or to develop abilities of students identified as gifted. However, the educational system does not provide for students who may be LD/G, i.e., individuals who need remediation, but also enrichment activities. Further, mastery of written language is important to the success of students in school. Starting in elementary school and all through college writing is a major means by which students demonstrate knowledge, and a basic tool through which teachers evaluate academic performance. Nevertheless, there is little research on the diagnostic/prescriptive needs of LD/G children in the area of written language.

Although information about LD/G students has increased in the last decade, many issues remain unsolved or are lacking in-depth study (Yewchuck, 1986). Research and case studies suggest that there are children demonstrating gifted behavior, as defined by Renzulli (1978) in his three-ring conception of giftedness. Above average ability, creativity, and task commitment could all be identified in the activities of these children. These same traits,

nevertheless, are glaringly lacking in their academic performance (Baum, 1984).

Additionally, children who have been identified as gifted (G) are not necessarily gifted in all areas of the curriculum (Leff, 1983). As stated in the definition formulated by the United States Office of Education (Marland, 1971), "Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas:

a) general intellectual ability

b) specific academic aptitude

c) creative or productive thinking

d) leadership ability

e) visual and performing arts

f) psychomotor ability" (p. 123).

Within the context of the USOE definition, a child does not have to excel in all areas to be considered gifted. On the contrary, potential or evident achievement in only one of the itemized areas is sufficient to meet the criterion of giftedness. Furthermore, no lower limits of ability are stipulated in areas of non-giftedness (Yewchuck, 1985). Thus, it is theoretically consistent to state that there are gifted children who show a discrepancy between potential and achievement and, therefore, also meet the requirement of being labeled learning disabled.

LD/G children have been found to demonstrate problems with language and conceptualization, memory, sequencing, spatial perception, and perceptual-motor integration (Baum, 1984).

Therefore, writing is one of the difficulties often faced by this population. It involves mastery of a number of special skills. In addition to mastering basic grammar and spelling rules, writers must be able to express their ideas creatively and maturely (Stoddard & Renzulli, 1983). Writing also involves a method of developing the "product" in a logical sequence of ideas and time (Leff, 1983). In addition, writing involves the manipulation of cognitive and linguistic processing systems. Children must perceive the similarity between writing and oral language. For example, "...the relationship of grammar to communication is a neurological and developmental characteristic of linguistic processing" (Giordano, 1983, p. 475). Proficiency in written language may contribute substantially to the learning disabled (LD) student's independence, vocational flexibility, and success in secondary and postsecondary programs (Alley & Deshler, 1979; Englert et al., 1988).

In summary, research on written language can advance our understanding of writing in general, and among exceptional children in particular. Perhaps we will have a better understanding of the LD/G population and their writing needs by systematically comparing their written productions to their G, LD, and N peers.

This study focused on a comparison of the results obtained from the analysis of written language products as measured by the Test of Written Language-2 (TOWL-2) of four populations: Gifted, (G) Learning Disabled/Gifted-like, (LD/G), Learning Disabled, (LD) and Non-Learning Disabled/Non-Gifted, (N). Through these

comparisons, the study was expected to support the speculation that LD/G students are a mixed population who therefore would show similarities to both LD and G, but yet also display some distinctions. It was predicted that they would manifest difficulties on the mechanical, conventional and contrived aspects of written language, like their LD peers, but unlike non-gifted LD and like G and N they would have no difficulties in ideation and conveying of meaning. On this basis it was expected that the LD/G group would score equal or similarly to the G in the subtests of thematic maturity, vocabulary and contextual vocabulary, and similar or equal to the LD in the subtests of spelling, contextual spelling, style and contextual style.

Objectives. The major purpose of this study was to comparatively examine the written language of Learning Disabled/Gifted (LD/G, n=6), Gifted (G, n=8), Learning Disabled (LD, n=6), and Normal (N, n=6) elementary school males enrolled in 4th through 6th grade classrooms. One of the newest classifications in the gifted and the learning disability research literature defines Learning Disabled/Gifted as a distinct group (Fox, et al., 1983; Boodoo, et al., 1989). Students with learning disabilities are thought to have basic psychological processing difficulties in such areas as verbal memory, sequencing and receptive/expressive language (Levine, 1987). These difficulties are likely to effect language production. Research literature suggests that for some writing tasks this group would not perform significantly different from other groups, while on other tasks

there should be significantly different (alpha < .05) writing performances. This study was specifically designed to examine the written language performance of the LD/G group as contrasted with the other more traditionally defined groups.

Methods. Subjects for this study were initially selected from a pool of 71 fourth, fifth and sixth graders in a Midwestern urban school system. The male subjects were classified into four groups including students identified by the school system as gifted (G), learning disabled (LD), students who exhibited characteristics of both the LD and Gifted population (LD/G), and those who were considered normal (N). Gifted students were identified by this school system if they ranked in the 95th percentile or higher in language arts on a group administered Iowa Test of Basic Skills. The LD/G students were identified by two criteria: (1) a Full-scale IQ of at least 120 on either the Otis Lenon School Ability Test, the Short Form Test for Academic Aptitude, or the Test of Cognitive Skills; 2) a minimum of 20 standard score points difference between their scores in language arts and their full scale IQ. This identification procedure is similar to Schiff et al., (1981) and Waldron et al., (1987). LD subjects had to have IQ's between 90 and 110 with an achievement-ability discrepancy of two standard deviations below the mean on an individualized reading/language arts test. Normal subjects (N) were randomly selected from a pool of similar aged children who had no history of learning problems and had IQ's between 90 and 110. The Test of Written Language-2 (TOWL-2) was used to assess written language performance. Seven

subtests from the TOWL-2 were used as dependent measures which were contrasted among the four groups of subjects. Seven one-way ANOVA's were used to test hypothesized differences among the four exceptionality groups (the independent variable), and Scheffe post hoc tests were used to identify significantly ($p < .05$) different group means.

Results. We obtained significant differences among the four groups on four of the seven subtests of the TOWL-2. These subtest included **Contextual Style, Vocabulary, Spelling** and **Style**. These data are presented in Tables 1 and 2, and Figures 1 through 4.

Significance. The new category of Learning Disabled/Gifted bridges the conceptualization of two exceptionality areas, that of the Learning Disabled and the Gifted. Our partial confirmation of predicted differences and similarities moderately supports the construct validity of this category of exceptionality, that is, the Learning Disabled/Gifted. Students with learning disabilities were thought to have basic psychological processing difficulties in such areas as verbal memory, sequencing and receptive/expressive language (Levine, 1987). These difficulties are likely to effect language production. Research literature suggests that for some writing tasks **LD** students should not perform significantly different from other groups, while on other tasks there should be different writing performances. While our Gifted sample significantly ($p < .05$) out-performed the other groups, they were not significantly different from the **LD/G** group on the Vocabulary,

Table 1

Mean TOWL-2 standard scores for seven subtests by four comparison groups.

	Groups				
Subtests	G	LD/G	LD	N	
	n = 8	6	6	6	$F_{(3,22)}$
TM	13.38	14.00	10.17	12.68	1.13
CV	10.75	10.50	7.33	9.17	1.83
CS	9.63	8.00	8.00	10.00	.83
CST	11.00 A[1]	8.83 A/B	6.67 B	8.83 A/B	3.43*
V	15.50 A	11.67 A/B	9.33 B	10.50 B	6.75*
S	13.63 A	11.17 A/B	4.83 D	10.17 B/C	21.61*
ST	13.13 A	11.00 A/B	8.33 C	10.00 B/C	12.24*

Note: TM = Thematic Maturity; CV = Contextual Vocabulary; CS = Contextual Spelling; CST = Contextual Style; V = Vocabulary; S = Spelling; ST = Style; G = Gifted; LD/G = Learning Disabled/ gifted-Like; LD = Learning Disabled; N = Non-Gifted/Non-Learning Disabled.

*p<.05.

[1]Means with the same letters are not significantly ($p < .05$) different from other means in the same row, Scheffe post hoc test.

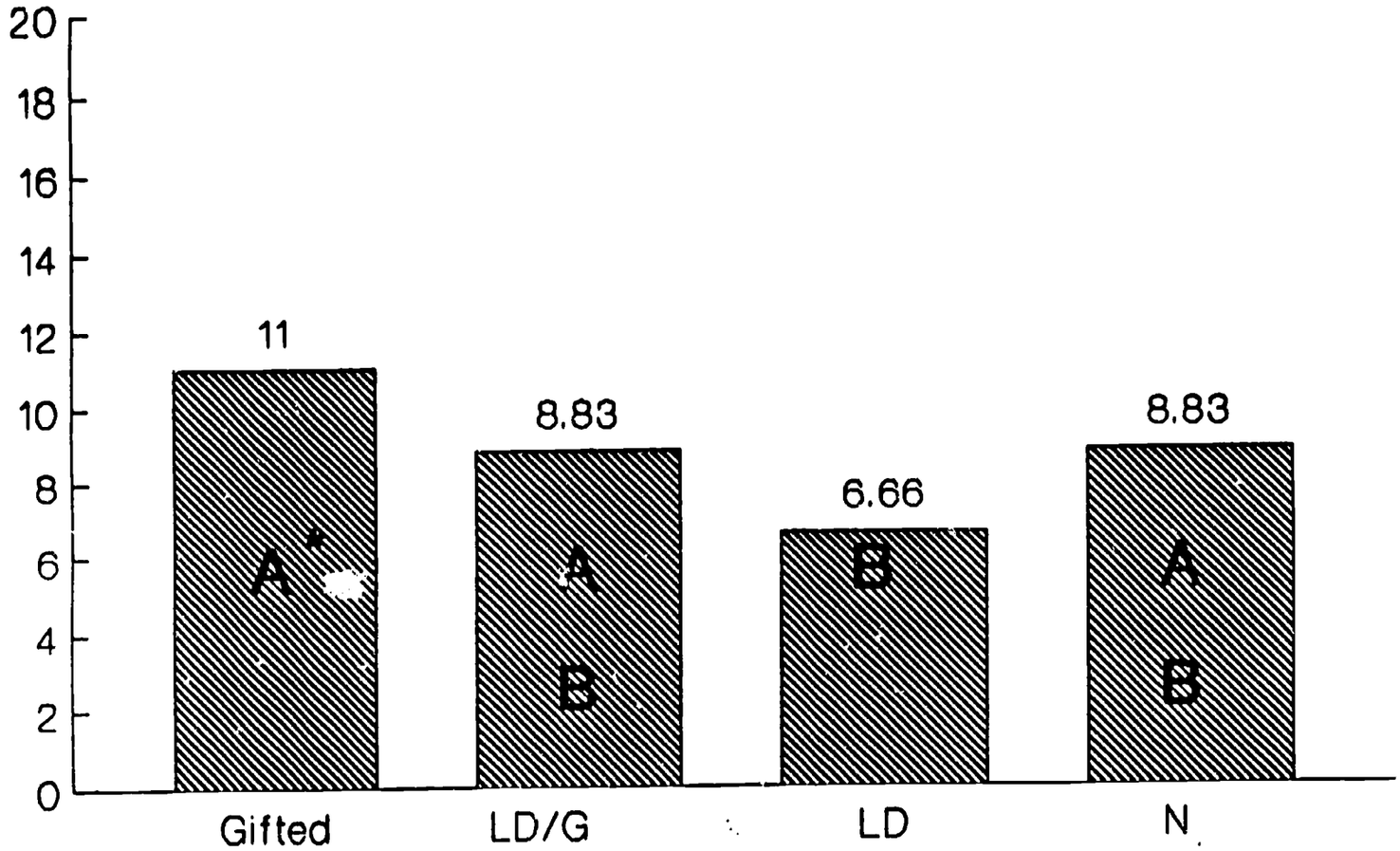
Table 2

Seven One-Way ANOVAs Contrasting the TOWL-2 Subtest Scores among four groups (n=26*)

Source	MS_e	F	P<
	Thematic Maturity		
Between groups	17.37	1.13	NS
Within Groups error	15.37		
	Contextual Vocabulary		
Between Groups	15.76	1.83	NS
Within Groups error	8.59		
	Contextual Spelling		
Between Groups	7.03	.83	NS
Within Groups error	8.45		
	Contextual Style		
Between Groups	21.67	3.43	<.05
Within Groups error	6.32		
	Vocabulary		
Between Groups	51.60	6.75	<.01
Within Groups error	7.64		
	Spelling		
Between Groups	90.75	21.61	<.001
Within Groups error	4.20		
	Style		
Between Groups	27.94	12.24	<.0001
Within Groups error	2.28		

*Degrees of freedom for all 7 one-way ANOVAs are df=3,22.

CONTEXTUAL STYLE SUBTEST
CONTRAST OF FOUR GROUPS

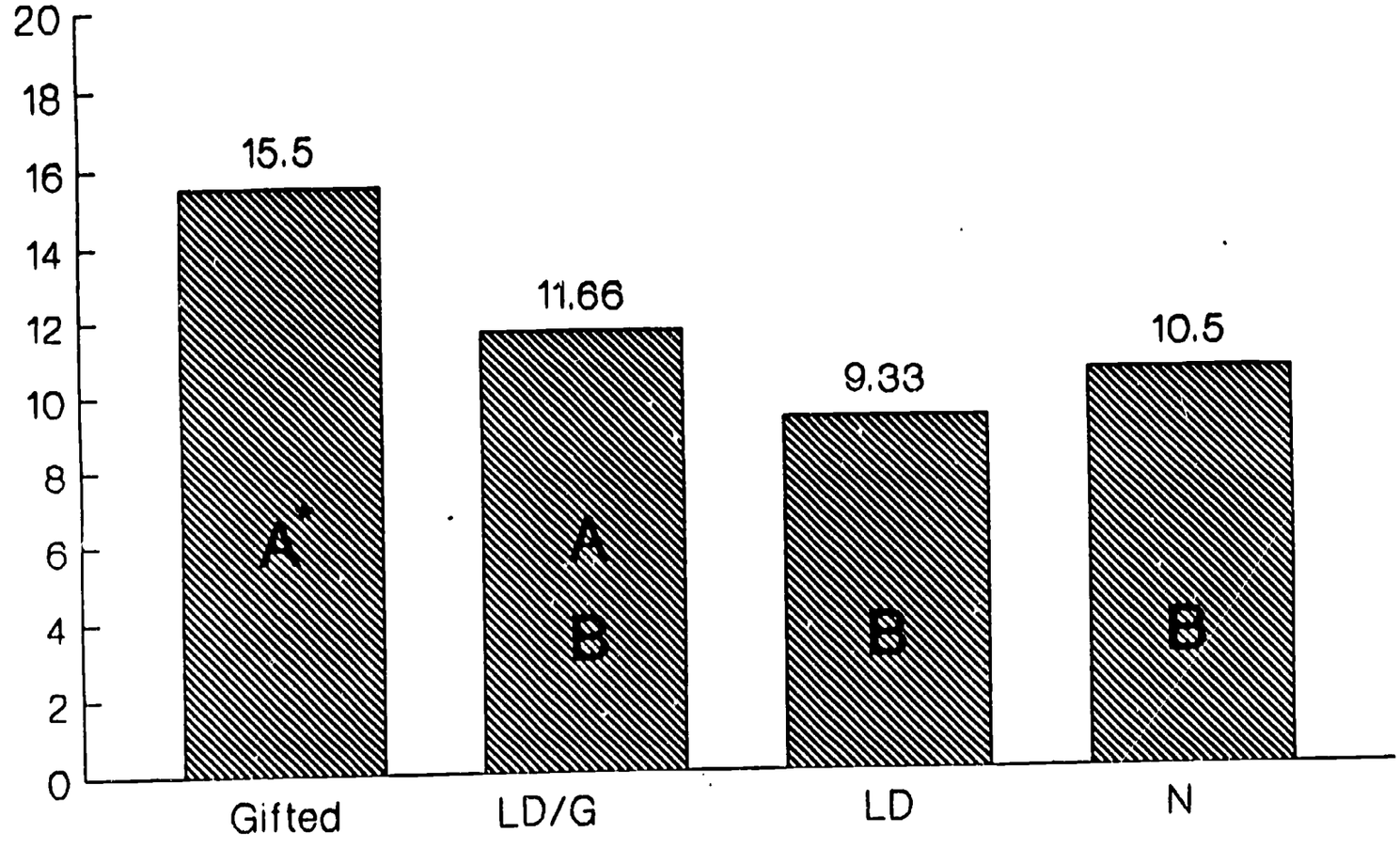


- **Bars with same letters are not different (p<.05) from each other.**

$F(3,22) = 3.43, p < .05.$

Figure #1

VOCABULARY SUBTEST
CONTRAST OF FOUR GROUPS

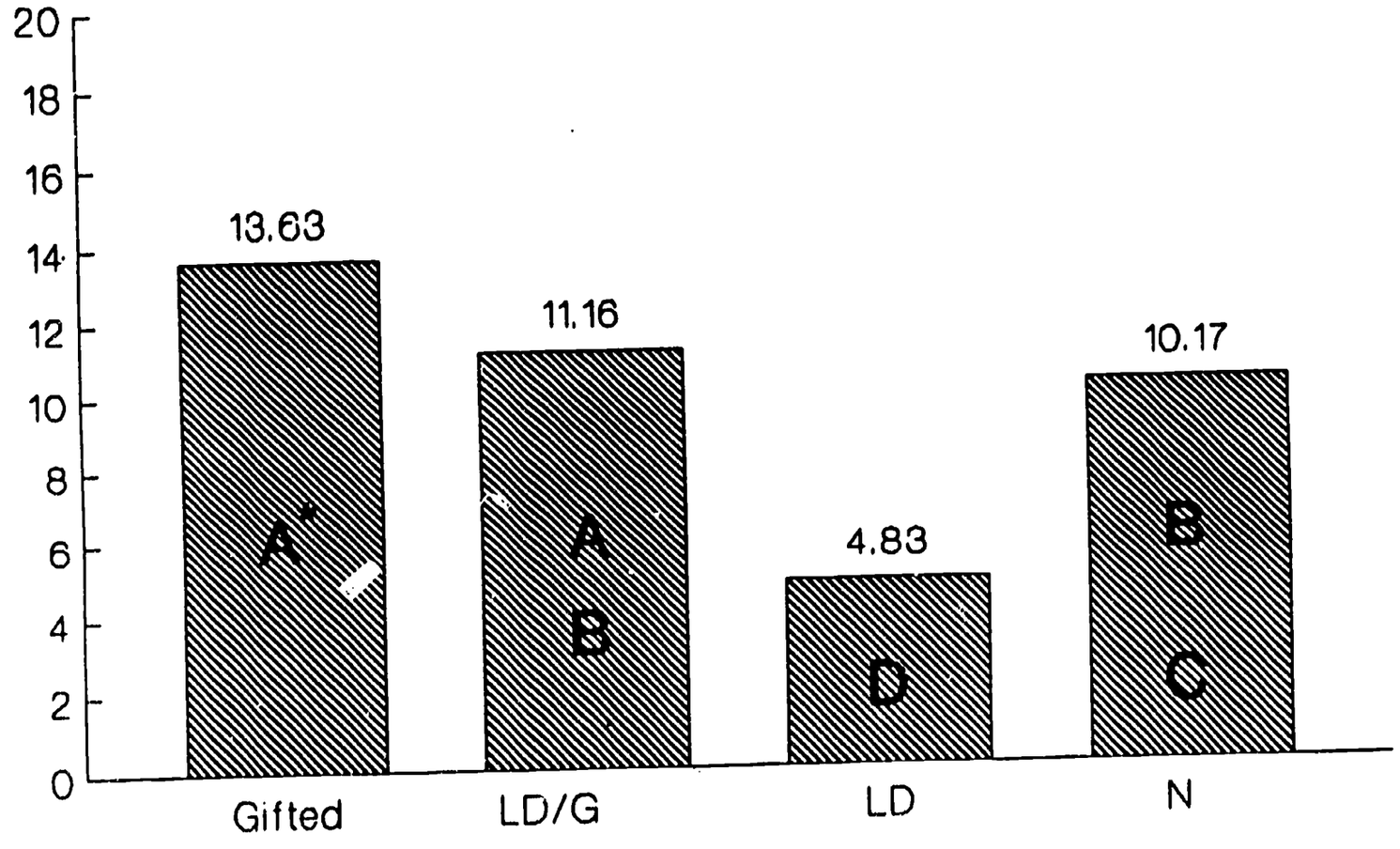


- **Bars with same letters are not different (p<.05) from each other**

$F(3,22) = 6.75,\ p < .05.$

Figure #2

SPELLING SUBTEST
CONTRAST OF FOUR GROUPS

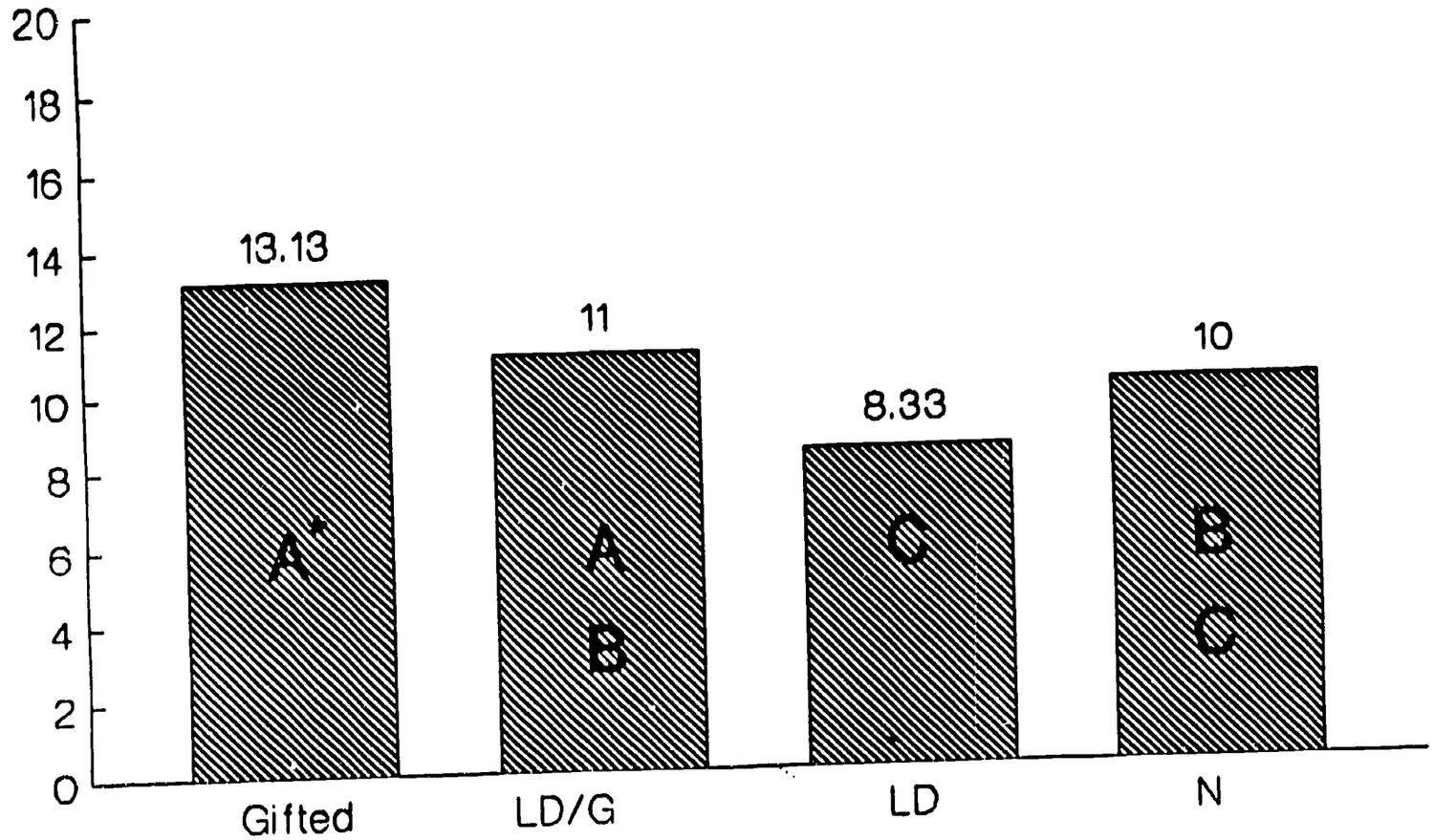


- **Bars with same letters are not different (p<.05) from each other.**

$F(3,22) = 21.61, P < .01.$

Figure #3

STYLE SUBTEST
CONTRAST OF FOUR GROUPS



- **Bars with same letters are not different (p<.05) from each other.**

$F(3,22) = 12.24, P < .01.$

Figure #4

Style, Contextual Style and Spelling subtests. Our LD group was consistently the poorest performer on each of these same subtests. In this sense, we believe that the similarity between the LD/G and G group is a partial validation of the construct Learning Disabled/Gifted.

On areas related to thematic maturity, contextual vocabulary, and contextual spelling, the LD/G group performed similarly to the other three groups, as no inter-group differences were found. Thus, the LD/G students did perform similarly to G, but so did the N and LD groups. The findings suggest that, at least for this small sample of males, this age level, and the task demands of the TOWL-R, the groups were similar and LD/G students do not have difficulties in these areas (the "less contrived aspects") of the written language.

Whereas LD/G subjects were expected to perform similarly to LD students on mechanics, spelling, and grammar, they actually performed more like normal learners. For example, on the Contextual Spelling, Contextual Style, Spelling, and Style subtest LD students showed no significant differences with the N students. This finding suggests that in this sample the LD/G subjects did not have a significant weakness in the grammatical (contrived) aspects of writing.

The LD students performed lower than the other three groups on spelling, which was to be expected, given earlier research findings on this population. That they were similar to N on all other tasks suggests that LD students in this small sample did not

exhibit a significant problem with other aspects of written language, aside from spelling. The G students outperformed N's (and LD's) only in vocabulary. This finding suggests that these students may have more sophisticated writing vocabularies then previously thought. No other subtests distinguished the G from the N group.

Implications.

The results of this study suggest the need of further exploration of some of the findings, using a larger sample. In light of the results, with an all male sample this size it is not possible to make generalizations about our target population, the LD/G. Future research should also extend the age range of the population, since it is possible that the skills measured by the TOWL-2 might not be discriminating factors at the age levels used in the present study. New research should also use a different criteria for selecting the LD/G populations, for example individual intelligence and achievements tests, and possibly also some other informal methods, such as teacher nomination and teacher made tests. Another point of consideration could be the use of another instrument to measure writing skills. It is possible that, for example, free writing, word length and word frequency as a method of measuring Contextual Vocabulary. The TOWL-2 may not have shown significant differences because the children may have been afraid to use more advanced vocabulary due to spelling difficulties.

While some might be critical of the small n's which were used in this study, others might be impressed with the fact that in spite of these small samples four out of seven subscales did obtain significant differences among our four groups. Smaller samples usually result in a greater likelihood of failing to reject the Null Hypothesis.

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