FUNCTIONAL COMMUNICATION SKILLS AMONG EXCEPTIONAL AND NORMAL EIGHT YEAR OLD CHILDREN

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Language and communication skills are important for everyone. Our humanity is diminished in direct proportion to communication skill limitations. As we continue to move into the information age, verbal behavior (echoing, listening, speaking, reading, taking dictation, writing text, etc.) skills will be even more important in our daily lives. Both vocational and recreational activities will increasingly emphasize successful communication. Those with communication handicaps will pay a price in terms of participation, productivity and socio-economic advantages.

The fact that our culture has recently invented the construct "learning disability" to identify deficits in understanding or using spoken or written language, is an expression of increasing dependence on verbal communication skills in an information age society. In earlier agricultural and industrial periods there were many opportunities for young people to find their vocational and personal niches in society, even with deficits in listening, speaking, reading, or writing.

PROBLEM

Learning disabled children are assumed to be uniquely deficient in the verbal skills just mentioned. This study is a check of this assumption, using the measurement technology of Precision Teaching. Some researachers have been critical of the categorical approach to special education(Hallahan and Kauffman, 1978) and have studied the behavior characteristics of one or more of the categories of handicapping conditions(Sherry, 1979; Ysseldyke, Algozzine, and Epps, 1983) using other measurement methods.

This study extends the research which has examined the validity of the categorical approach to classification in special education. It asks the question, "are learning disabled students uniquely deficient in practical communication skills?" Since Precision Teaching measurement technology is new to this area of research, additional investigation is justified. Precision Teaching technology offers advantages that will show more clearly similarities and differences in communication skills among categories of exceptional students. Direct and frequent measures using frequency as the standard unit of measurement and the Standard Celeration Chart as the standard measurement scale are these advantages.

The results may be useful in several ways. In addition to discovering whether learning disabled students are uniquely deficient in language skills, we will provide data on the relationship of language skill development in categories of exceptional groups to the skill level of proficient adults. This makes it possible to get a feel for the size and importance of the deficits in these children. Also, the procedures used and results obtained may suggest ways to improve current methods for classifying mildly and moderately handicapped children by using Precision Teaching measurements and a functional orientation.

METHOD

Subjects and Setting. Table 1 presents data describing the samples by group, number of subjects, and sex. Children were selected from a school district in North-Central Florida with a base of 22,000 students. Four groups were included: learning disabled(L.D.), emotionally handicapped(E.H.), gifted, and regular program. All exceptional children in the study met the Florida Department of Education and local district special education placement guidelines.

Six schools agreed to participate and supplied lists of students by exceptionality, age, and classroom. Participants were randomly selected from the lists. Only students within plus or minus six months of their eighth birthday were selected.

A sample of adults was also included in the study to provide a criterion for proficiency. The adults were students in an undergraduate class in

the College of Education at the University of Florida.

TABLE 1

Subjects by Classification and Sex

Class.	Number	Female	Male
Adult	10	9	1
Gifted	16	10	6
Regular	23	9	14
L.D.	12	3	9
E.H.	18	4	14
TOTALS	79	35	44

Materials and Dependent Measures. Tasks selected for the study were designed to evaluate competence on four practical communication tasks with high functional value in day to day living. The tasks were: listening and then repeating spoken instructions (echoic speaking); reading a passage (oral reading); writing a spoken message (dictation); and writing about a picture viewed (composition) (Dunn, 1966). See Table 2 for a detailed description of the dependent measures.

Selection criteria were given to the principal of each school. They, in turn, prepared a list of all children meeting the age and exceptionality criteria. When we arrived at a school the first time we randomly selected children from the list, called them from their classrooms, explained the tasks, and administered eight timings. Cooperation was good, even though timings were new to almost all of the children.

Procedures. Five students and the authors administered all the timings and recorded the data. The procedure took 10 to 15 minutes per child.

Scoring. Frequency and accuracy scores were used wherever applicable, as shown in Table 2. The fluency is the sum of correct and error respond- ing.

RESULTS

For each category of student, the high, low, and median scores are reported for each component of each task(see Charts 1 and 2). By looking at the medians and ranges in Charts 1 and 2, it is easy to see the differences between groups and between communication skills within groups. Scores for adults may be used as a reference point for making judgments about the degree of proficiency attained by each group of students.

Table 3 displays the frequency multipliers for comparisons between the medians for each exceptionality group and for two reference groups--regular class students and adults.

Oral Reading. With this task, gifted and regular students were one third and one quarter, respectively, as accurate as proficient adults. Learning disabled (LD) and emotionally handicapped (EH) students were only one thirteenth and one fourteenth as accurate as the adults sampled. On reading fluency, the gifted and regular students were a divide by two of adult fluency, while LD were a /12.9 and EH a /4.3, while the median EH eight year old was only reading about 60 words per minute, the median LD student was reading over 90 words per minute.

Echoic Responding. Accuracy is the important aspect of this skill. Gifted students are a /2.4 of adults. LD students are only slightly less accurate with a /2.9 of adult accuracy. EH students were a /4 of adult accuracy.

Dictation. The gifted students were /1.4, and the LD and EH /2 and /2.1 less accurate than adults. Gifted students were x1.2 more fluent than regular students and /2.1 less fluent than adults. LD and ED students were /1.2 and /1.3, respectively, less fluent than regular students, and /2.9 and /3.3, respectively, less fluent than adults.

Composition. The main measure with this task is the number of words written within the allotted time--a fluency measure. Gifted students, on the average, wrote x1.2 more words than regular students and /1.2 fewer words than adults. LD students wrote only half as many words as regular students and only /2.7 as many as adults. The EH students wrote /1.5 fewer words than regular students and /2 fewer than adults.

Table 2
Description of Dependent Measures

Task	Learning Channel Set	Recording Plan	Components Measured
Oral Reading	See/say	5 30-second samples	Accuracy[1] Fluency[2]
Echoic Speaking	Hear/say	Time to say 3 sentences	Accuracy Fluency
Dictation	Hear/write	Time to write 4 short sentences	Accuracy Fluency
Composition	Think/write	5-minute sample	Fluency

[1] Accuracy= frequency correct/frequency of errors(Accuracy Ratio)
[2] Fluency= movements per minute

Table 3
Main Comparisons using Frequency Multipliers

ACCURACY			FLUENCY	
	Regular	Adult	Regular	Adult
Oral Reading				
Gifted	x1.2	/3.3	x1.0	/2.1
LD	/3.3	/12.7	/1.4	/2.9
EH	/3.7	/14.0	/2.0	/4.3
Echoic Speaking				
Gifted	x1.0	/2.4	x1.7	/1.6
LD	/1.2	/2.9	x1.0	/2.9
EH	/1.6	/4.0	x1.2	/2.4
Dictation				
Gifted	x1.4	/1.4	x1.2	/2.1
LD	x1.0	/2.0	/1.2	/2.9
EH	/1.1	/2.1	/1.3	/3.3
Composition				
Gifted			x1.2	/1.2
LD			/2.0	/2.7
EH			/1.5	/2.0

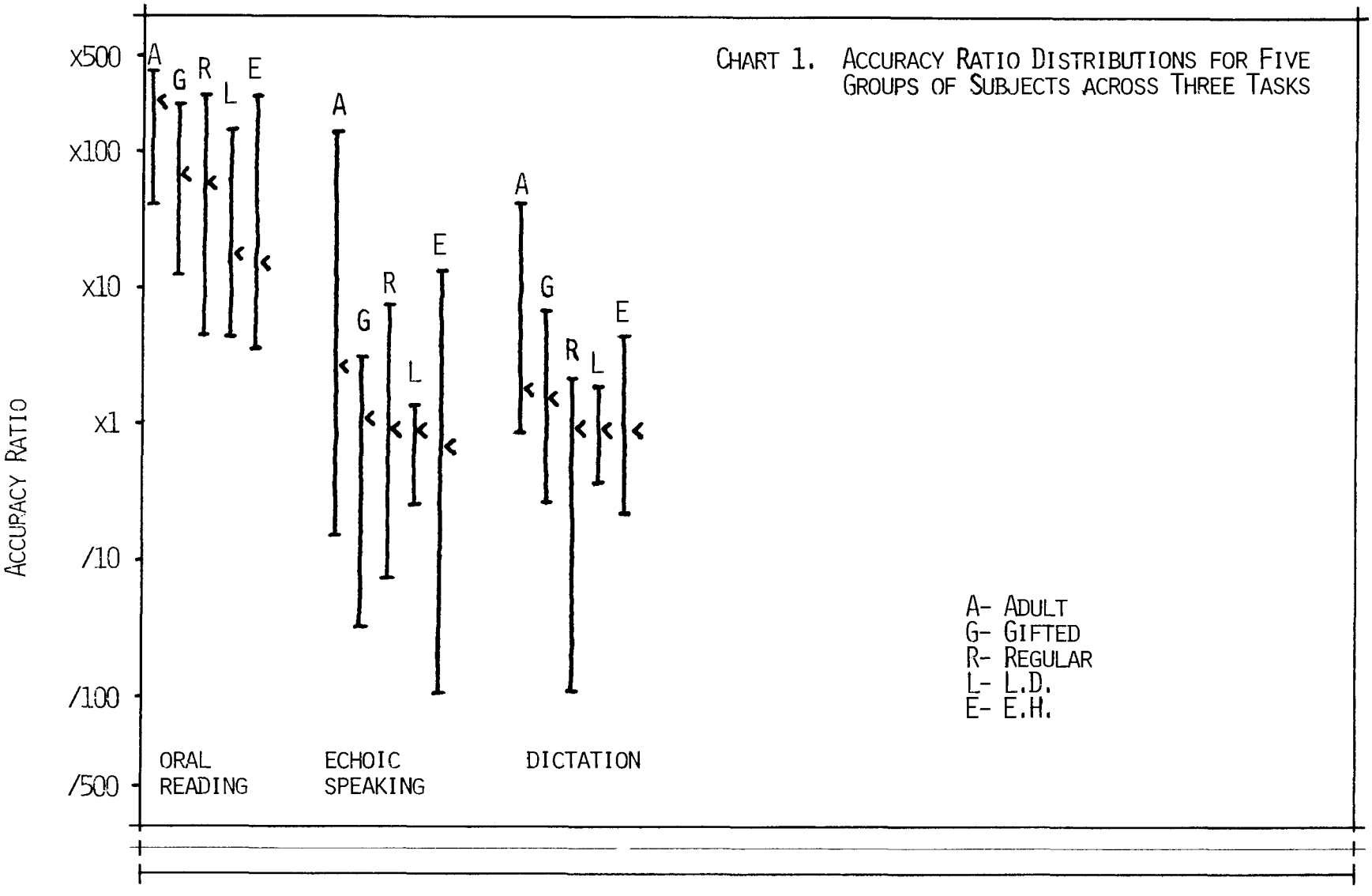

CHART 1. ACCURACY RATIO DISTRIBUTIONS FOR FIVE GROUPS OF SUBJECTS ACROSS THREE TASKS

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FIVE GROUPS OF SUBJECTS PERFORM THREE

UNIVERSITY OF FLORIDA GAINESVILLE, FLORIDA

COMMUNICATION TASKS

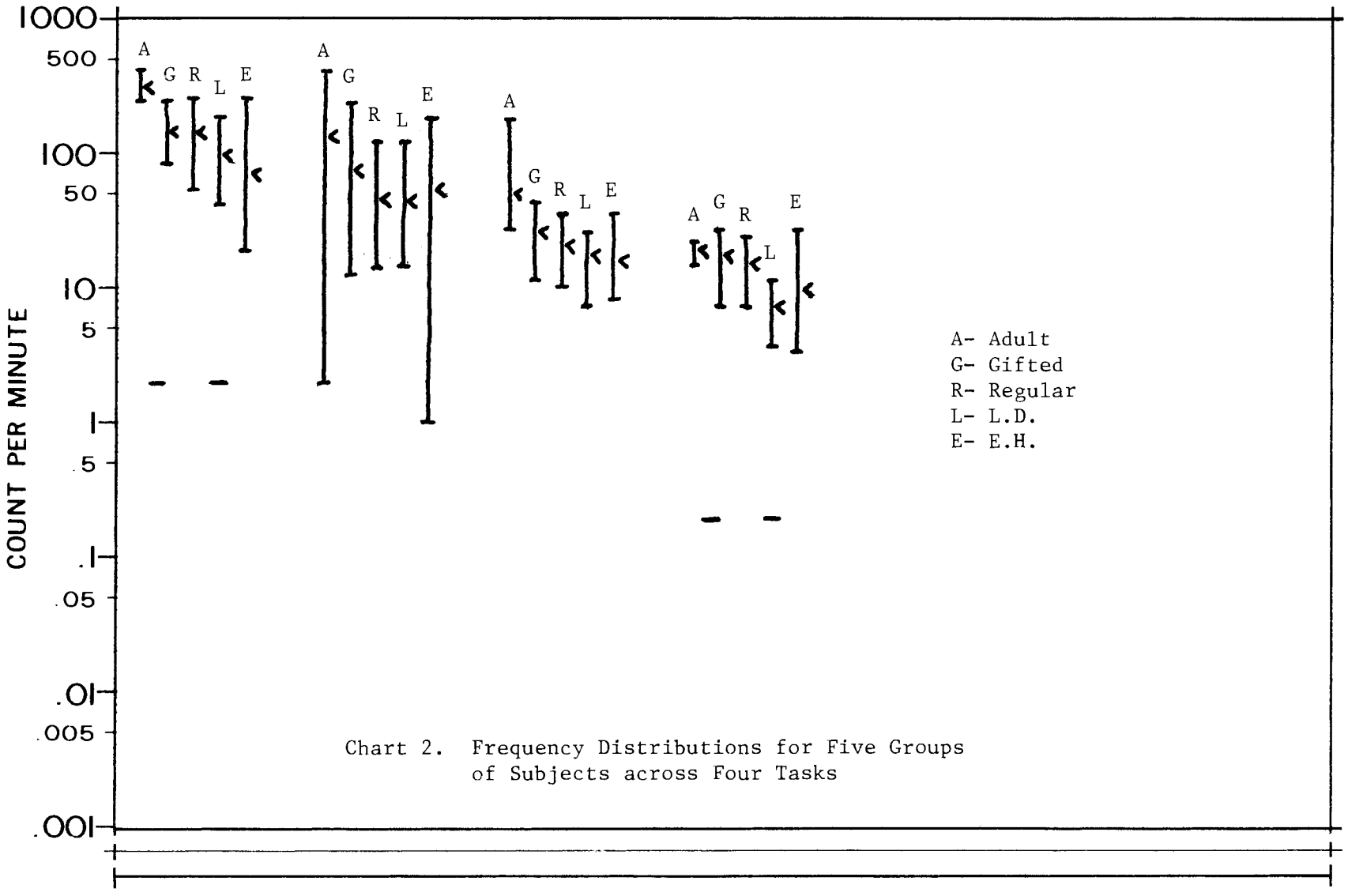

Chart 2. Frequency Distributions for Five Groups of Subjects across Four Tasks

Wolking Branscum McKay Five Groups of Subjects perform four

University of Florida Gainesville, Florida communication tasks

DISCUSSION

The results displayed in Charts 1 and 2 and Table 3 do not support the contention that LD students have unique language deficits, at least, not on the practical communication skills used in this study. In terms of median scores, LD and EH students are very similar, with LD students generally having slightly higher medians. Except for oral reading, neither LD nor EH students are much worse than regular students. However, regular students do have practical advantages on accuracy and fluency of oral reading. Comparing the ranges of scores for regular students, we see that the range of LD scores is, with minor exception, well within the range of scores for regular students. The overlap of score distributions between LD and regular student groups is almost complete. The range of scores for LD students is generally smaller than the range for any other student group. EH students generally have the largest score ranges, making them the least homogeneous group.

When compared with proficient adults, all student groups are least skillful in oral reading. In particular, they are less accurate, especially the LD and EH groups. The LD and EH group medians are a /2 to /3 of adult medians on echoic speaking, dictation and composition skills. Even the gifted students are a /2.1 of the adult median on dictation fluency. It is surprising how small the differences are between gifted and regular students. It is both a popular and professional belief that gifted students are superior in verbal communication skills. Our data do not lend much support to this belief.

It is also a popular belief, and a defining construct, that LD students are uniquely deficient in the use of spoken and written language. Within the limits of the skills evaluated and the Flordia DOE guidelines for selecting exceptional students, it appears that mild to moderate EH students have equally large functional verbal deficits. Neither group showed important practical deficits when compared with regular students.

These findings are one more piece of evidence that the definition of learning disability, based as it is on the concept of unique language deficit, is not tenable. The percent of overlap in the score distributions among regular, LD, and EH students is very high. And there is even major overlap with the distribution of scores for the gifted students. It's time to increase efforts to base the selection and placement of academically handicapped students on functional definitions. Some work has already been done(White, 1980). Classroom Precision Teachers are in a unique and powerful position to contribute to the development of a functional approach to initial placement and instruction for problem learners. They can provide data-based descriptions of performance and learning to replace traditional labels for hypothetical disabilities.

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