INSTITUTE FOR RESEARCH IN LEARNING DISABILITIES
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AN EPIDEMIOLOGICAL STUDY OF LEARNING DISABLED AND LOW-ACHIEVING ADOLESCENTS IN SECONDARY SCHOOLS: BEHAVIORAL AND EMOTIONAL STATUS FROM THE PERSPECTIVE OF PARENTS AND TEACHERS

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The University of Kansas Institute for Research in Learning Disabilities is supported by a contract (#300-77-0494) with the Bureau of Education for the Handicapped, Department of Health, Education, and Welfare, U. S. Office of Education, through Title VI-G of Public Law 91-230. The University of Kansas Institute, a joint research effort involving the Department of Special Education and the Bureau of Child Research, has specified the learning disabled adolescent and young adult as the target population. The major responsibility of the Institute is to develop effective means of identifying learning disabled populations at the secondary level and to construct interventions that will have an effect upon school performance and life adjustment. Many areas of research have been designed to study the problems of LD adolescents and young adults in both school and non-school settings (e.g., employment, juvenile justice, military, etc.)

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Cooperating Agencies

Were it not for the cooperation of many agencies in the public and private sector, the research efforts of The University of Kansas Institute for Research in Learning Disabilities could not be conducted. The Institute has maintained an on-going dialogue with participating school districts and agencies to give focus to the research questions and issues that we address as an Institute. We see this dialogue as a means of reducing the gap between research and practice. This communication also allows us to design procedures that: (a) protect the LD adolescent or young adult, (b) disrupt the on-going program as little as possible, and (c) provide appropriate research data.

The majority of our research to this time has been conducted in public school settings in both Kansas and Missouri. School districts in Kansas which are participating in various studies include: United School District (USD) 384, Blue Valley; USD 500, Kansas City; USD 469, Lansing; USD 497, Lawrence; USD 453, Leavenworth; USD 233, Olathe; USD 305, Salina; USD 450, Shawnee Heights; USD 512, Shawnee Mission, USD 464, Tonganoxie; USD 202, Turner; and USD 501, Topeka. Studies are also being conducted in Center School District and the New School for Human Education, Kansas City, Missouri; the School District of St. Joseph, St. Joseph, Missouri; Delta County, Colorado School District; Montrose County, Colorado School District; Elkhart Community Schools, Elkhart, Indiana; and Beaverton School District, Beaverton, Oregon. Many Child Service Demonstration Centers throughout the country have also contributed to our efforts.

Agencies currently participating in research in the juvenile justice system are the Overland Park, Kansas Youth Diversion Project and the Douglas, Johnson, and Leavenworth County, Kansas Juvenile Courts. Other agencies have participated in out-of-school studies--Achievement Place and Penn House of Lawrence, Kansas, Kansas State Industrial Reformatory, Hutchinson, Kansas; the U.S. Military; and the Job Corps. Numerous employers in the public and private sector have also aided us with studies in employment.

While the agencies mentioned above allowed us to contact individuals and supported our efforts, the cooperation of those individuals--LD adolescents and young adults; parents; professionals in education, the criminal justice system, the business community, and the military--have provided the valuable data for our research. This information will assist us in our research endeavors that have the potential of yielding greatest payoff for interventions with the LD adolescent and young adult.

AN EPIDEMIOLOGICAL STUDY OF LEARNING DISABLED ADOLESCENTS IN SECONDARY SCHOOLS

Abstract

In recent years, professionals in the field of learning disabilities have begun to address the impact of learning disabilities on adolescents and young adults. Although substantial attention has been directed to the manifestations of learning disabilities in elementary school age populations, the significantly different and increasingly complex demands on adolescents both in and out of school necessitate the development of systematic research on this population. The University of Kansas Institute for Research in Learning Disabilities has collected a broad array of data to form an epidemiological data base on LD adolescents and young adults. Data have been collected from learning disabled, low-achieving, and normal-achieving adolescents as well as from their parents and teachers. In addition, information from the environmental setting of the LD adolescents which pertains to interventions applied on behalf of the student, relationships with others, conditions under which he/she operates and support systems available for his/her use has also been collected. These data have been considered in relation to data on specific learner characteristics to gain a more complete profile of the older LD individual.

Research results presented in Research Reports 12 through 20 detail findings from this comprehensive epidemiology study conducted during 1979-80 by the Institute. It is important for the reader to study and view each of these individual reports in relation to this overall line of research. An understanding of the complex nature of the learning disability condition only begins to emerge when each specific topic or finding is seen as a partial, but important, piece of a larger whole.

The specific aspects of the total study presented in individual Research Reports are listed below:

Research Report No. 12:	Details of the Methodology
Research Report No. 13:	Achievement and Ability, Socioeconomic Status, and School Experiences
Research Report No. 14:	Academic Self-Image and Attributions

Research Report No. 15: Health and Medical Factors

Research Report No. 16: Behavioral and Emotional Status from the Perspective of Parents and Teachers

Research Report No. 17: The Relationship of Family Factors to the Condition of Learning Disabilities

Research Report No. 18: Social Status, Peer Relationship, Activities In and Out of School, and Time Use

Research Report No. 19: Support Services

Research Report No. 20: Classification of Learning Disabled and Low-Achieving Adolescents

AN EPIDEMIOLOGICAL STUDY OF LEARNING DISABLED AND LOW-ACHIEVING ADOLESCENTS IN SECONDARY SCHOOLS: BEHAVIORAL AND EMOTIONAL STATUS FROM THE PERSPECTIVE OF PARENTS AND TEACHERS

Since the inception of the learning disability field in the early 1960s, emphasis for treatment and intervention has been on younger children. Only recently has attention been turned to addressing the educational and life adjustment needs of adolescents and young adults as well (Alley and Deshler, 1979). However, a prerequisite step to developing sound instructional systems and procedures for the older-aged learning disabled is for the field to achieve a thorough understanding of the complex nature of the condition of learning disabilities in older populations.

There are some unique problems related to adolescents with learning disabilities which have not been adequately addressed within the research on learning disabilities in elementary populations. Among these are the following: The demands of the curriculum in secondary schools or job requirements in employment settings are significantly different from the demands placed on LD students in elementary settings. Thus, the manifestations of the specific learning disability may be altered. Second, there are many variables associated with the condition of learning disabilities; it would appear that the complexity and interaction of these increase as the adolescent moves from school to non-school settings and as the number and variety of his/her social groupings increase (Deshler, 1978). Thirdly, there is very little knowledge about the conditions confronting the LD adolescent and young adult in non-school settings and the degree to which these individuals can cope with these circumstances.

The complex nature of the condition of learning disabilities and the unique features of the conditions and the environment facing the LD adolescent and young adult demonstrate the need for systematic research on this population. Most research efforts on LD populations have centered on the attributes of the learner alone, and thus have focused upon the intrinsic behavioral or cognitive causes of the disability. Such attempts have results in limited breakthoroughs regarding population identification and intervention development. A potentially productive research approach is one that considers not only learner attributes, but environmental factors as well as a means of describing and understanding the learning disabled adolescent and young adult. Lewin's (1935) formulation to explain human behavior, B = f (PE), where B = behavior, P = person, and E = environment, may be a more appropriate means of conceptualizing and researching learning disabilities. Through such an approach, learning disability would be viewed as a condition which results from a complex interaction between the learner and the environment. Therefore, the purpose of a major line of research conducted by The University of Kansas Institute for Research in Learning Disabilities has been to collect a broad array of data to form an epidemiology data base on older LD populations. Data have been collected from the environmental setting of the LD adolescent which pertain to interventions applied on behalf of the student, conditions under which he/she operates and support systems available for his/her use. These data have been considered in relation to data on specific learner characteristics to gain a more complete profile of the older LD individual.

Research results presented in The University of Kansas Institute for Research in Learning Disabilities Research Reports 12 through 20 detail findings from this comprehensive epidemiology study conducted during 1979-80 by the Institute. It is important for the reader to study and view each of these individual reports in relation to this overall line of research. An understanding of the complex nature of the learning disability condition only begins to emerge when each specific topic or finding is seen as a partial, but important, piece a larger whole. This specific research report will present findings on the behavioral and emotional status of learning disabled, low-achieving, and normal-achieving adolescents in secondary schools as reported by their parents and teachers.

Behavioral disorders of children and youth have been associated with home conditions for nearly a century (Freud, 1909). Behavioral patterns of maladjustment and patterns of home conditions were delineated by Hewitt and Jenkins (1945) nearly a half a century ago. More recently, investigators have developed objective measures of teachers' and others' perceptions which characterize children's behavioral manifestations (California State Department of Education, 1961; Kvaraceus, 1958; Morse, Cutler and Fink, 1964; Quay, Morse and Cutler, 1966). Teachers, using checklists and rating measures, have provided information to differentiate behavioral patterns of adolescents' emotional/social status based on perceptions of classroom and/or school performance in all but the California State Department of Education study. Kirk (1972) stated that when teachers are provided guidance, they can provide significant information to identify exceptional children and youth. This information can offer evaluative information for school programming of learning disabled (LD) students.

An early study of teachers' perceptions of LD students' classroom behaviors was conducted by McCarthy and Paraskevopoulous (1969). In this study, teachers of LD, emotionally disturbed and non-handicapped (regular classroom) students rated perceived behaviors of these students. The results of their perceptions were used to differentiate the behavioral patterns of the three groups of students. During the past decade, there has been a continued interest in the classroom behavior of LD students which was used as an index of their social/emotional status. Bryan (1978) provided a review of her works during this later period. She and her associates have been most closely identified with this research direction in the field of learning disabilities.

In a review of the research from 1978-1980 which has been published in the two major journals associated with LD, Journal of Learning Disabilities and Learning Disabilities Quarterly, only a portion of one study (Pearl, Bryan, and Donahue, 1980) was directly related to the social/emotional status of LD adolescents as determined by the observational perception of classroom observers. Only two studies, Bendell, Tollefson, and Fine (1980) and Pearl, Bryan, and Donahue used adolescents as subjects of study. However, the adolescents used in these two studies represented the junior high school level. No study was identified using senior high school youths or both junior and senior high school students.

Parents' perceptions of behavioral status has long been recognized as a source of information by physicians taking medical histories and social workers completing case studies. Parents' perceptions are used when obtaining social/emotional developmental status on measures such as the Vineland Social Maturity Scale and the AAMD Adaptive Behavior Scale, Public School Version. The usefulness of parents' perceptions

of children's emotional status has been used by Rimland (1964) to identify severe emotional problems. Recently, Alley, Deshler, Mellard, and Warner (1980) used parents' perceptions of behavioral manifestations of their adolescents to differentiate LD from non-LD youths.

The purpose of the present study was to investigate the social/emotional, cognitive/academic, and coping mechanisms of adolescents in secondary schools. The LD students' behaviors among these areas will be compared to those of low-achieving (LA) and normal-achieving (NA) age peers. The behaviors to be studied are based upon teachers' and parents' perceptions of adolescent behavior.

Two research questions will be answered:

1. Do regular classroom teachers' perceptions differentiate the behaviors of LD and LA youth?

2. Do parents' perceptions differentiate between LD and LA junior high school students and/or LD, LA, and NA adolescents attending senior high school?

Methodology

Subjects

Three groups of adolescents and their parents participated in this part of the study. The adolescents included LD students, low-achieving students, and normal-achieving students in grades 7, 8, 9, 10, 11, and 12. LD students were those currently being served in programs for learning disabled students and validated by the IRLD Validation team. Low-achieving (LA) students were students who had recently received one or more failing grades in required subjects, scored below the 33rd percentile on group administered achievement

tests, and who were not receiving special educational services. Normal-achieving (NA) students were those who had passing grades, scored above the 33rd percentile in achievement, and who were not receiving special educational services. The students and their parents agreed to participate in this study. For more details on student selection, see The University of Kansas Institute for Research in Learning Disabilities Research Report No. 12 (Schumaker, Warner, Deshler & Alley, 1980). Two hundred thirty-four LD students and 162 of their parents, 222 low-achieving students and 144 of their parents, and 215 normal-achieving students and 184 of their parents took part.[1]

Settings

Three school districts in northeast Kansas agreed to participate (USDs #500, #512, and #202). The students provided information for this study in small, quiet rooms selected by their schools. Parents provided information at their leisure at home. (For more information regarding settings see Schumaker et. al., 1980.)

Measurement System

Two assessment instruments, the Parent Instrument and the Regular Teacher Instrument, were used in this analysis. The instruments were designed with a number of questions regarding how much students liked school, how they responded to criticism and praise, their interactions with peers and school personnel, and other social behaviors in the school and home setting. Some questions involved Likert-type scales, others involved multiple choice answers, and still others allowed for open ended responding. (For more information about the instruments, see Research Report No. 12.)

Procedures

Parent and Teacher Instruments were completed by these individuals at their leisure. The Parent Instruments were either mailed or carried home by the students. Follow-up letters and phone calls prompted delayed returns. Teacher Instruments were distributed by research assistants in the schools.

Data Analysis

The University of Kansas Institute for Research in Learning Disabilities Research Reports which report data from the first phase of the comprehensive Level I epidemiological study are numbered (including the present report) 12 through 20. A thorough discussion of the specific procedures used in data analysis for the study as a whole as well as the rationale for those procedures is contained in Research Report Number 12, Details of the Methodology (Schumaker et. al., 1980). The following comments are condensed from that report.

In general, two types of variables are discussed in Research Reports 12-20: (a) individual items from the Youth, Parent, or Regular Teacher Assessment Instruments, or specific ability or achievement test scores and (b) FSCALES. The FSCALES were derived by equally weighting and averaging performance on two or more items from one of the assessment instruments. Items were combined into an FSCALE if they had a moderate to strong loading on the same factor. A listing of the items which made up each FSCALE is contained in Research Report No. 12.

In order to test for significant group differences in individual assessment instrument items, test scores, or FSCALES, the following procedure was adopted. The BMDP7D computer program (Dixon, 1975) was used to conduct a univariate F test for each variable under consideration. For each variable, if the p value associated with F was less

than or equal to .01, confidence bands for each mean were constructed. Two standard errors of the mean ($SE = SD/\sqrt{n}$) were added and subtracted from each mean. If the confidence bands for a given pair of means did <u>not</u> overlap, the means were considered significantly different.[2]

Results

Classroom Behavior of Youth Attributed by Regular Class Teachers

In this study, regular classroom teachers were asked to respond to eight questions which related to the classroom behaviors of LD and low-achieving (LA) adolescents. Three of the eight questions were of a multiattribute nature. In total, 76 responses were possible. The data were grouped and analyzed by 1)combined junior-senior high school data, 2) junior high school data, and 3) senior high school data. The combined data were analyzed first. If significant ($p < .01$) results were obtained and if the 98 percent mean score confidence bands did not overlap, then the junior high school and the senior high school data were analyzed separately. Only those variables which achieved significance and for which the mean scores confidence bands did not overlap in the combined group are presented in tabular forms. Other variables are listed for the interest of the reader (See Table 88).

Of the 76 variables on the regular classroom teacher measure, 20 yielded significant F-test results at or beyond the alpha = .01 level (Tables 1 through 37). Four of those 20 variables were found to have 98 percent confidence bands in which there was overlap (Tables 3 , 29 , 32 and 37). Each variable will be discussed in the order of presentation on the teacher measure and the data using only junior high school students and/or senior high students will then be summarized.

Eleven attributes comprised question 1, "How often do the following phrases describe this youth in your class?" (Tables 1 through 22). This item measures the frequency of positive and negative behaviors emitted by the LD adolescent. The range of frequency for each behavior ranges from "Never" to "Always" on a seven-point Likert-type scale. The medial position on the scale is "About half the time" or at a chance probability level.

Item 1.3 "Brings materials to class," was found to yield a significant ($p < .001$) mean score difference between the LD and LA adolescents. No overlap resulted between the LD and LA groups mean scores confidence bands. The LD group members were viewed as bringing their materials "often" whereas the LA group were perceived as bringing materials to class "about half the time." There was a full range of responses across the seven-point scale in each group (Table 1). A similar result ($p < .0001$) was found when analyzing the junior high school data separately. The range was the same and the levels of frequency identical to the combined data (Table 2). However, no significant difference was found between the LD and LA groups' mean scores when computing the senior high school data.

Item 1.7, "Aggression toward peers," yielded a significant F at the .01 level. However, the 98 percent confidence bands of the two groups' mean scores overlapped (Table 3). This overlap means that the significance level was most likely affected by chance factors. Therefore, the mean scores of the two groups should be viewed as similar on this item.

A significant ($p < .001$) difference was found between the LD and LA groups mean scores on item 1.8, "Greets you." There was no overlap of the two confidence bands of the means. It was found that LD students greet the teacher "about half the time" to "often" whereas the LA group greets the teacher "sometimes" to "about half the time" (Table 4). If one rounds the rating to the nearest point on the scale, there would be no gross difference between the two groups. The full range of the scale was used when describing the two groups of youths. When the junior high school and senior high school data were analyzed separately, only the senior high school data yielded significant results ($p < .01$). This

result was negated because the confidence bands of the groups means overlapped (Table 5). In view of these results, no difference exists between the LD and LA groups when offering a greeting to the teacher. Both groups greet the teacher "about half the time."

Item 1.19, "Speaks courteously to the teacher," reached the $p \leq .001$ level of significance based upon the F obtained in the analysis of the combined junior and senior high school data. No overlap resulted between the confidence bands of the groups' mean scores (Table 6). It was found that LD students speak courteously "quite often" to the teacher. The LA group, as a whole, often speak courteously to the teacher. The range of responses covered the scale for both groups. Only the junior high school data yielded both statistical significance ($p < .0001$) and no overlap of confidence bands of the means (Table 7). The magnitude of frequency and direction of difference were similar to that of the combined group. However, no LD student was perceived to "never" speak courteously, whereas this frequency was perceived by the teachers when rating the LA group.

The difference between the LD group and the LA group means was significant at the .001 level on item 1.12, "Attention to lecture or class discussion." The confidence bands of the means of the two groups did not overlap (Table 8). The nearest point for the two groups was "about half the time." Separate analyses of the junior and senior high school data revealed a significant difference ($p < .0001$) only at the junior high school level (Table 9). At this level, the magnitude of frequency was one criteria level. That is, the LD group "often" paid attention to lectures and class discussions, but the LA group paid attention only "about half the time."

Item 1.13, "Completes in-class assignments," yielded a significant ($p < .01$) mean difference between the LD and LA adolescents. No overlap

resulted between the LD and LA groups' mean score confidence bands. When the mean scores of the two groups are rounded to the nearest scale point, the LD and LA groups were perceived by teachers as completing in-class assignments about half the time. There was a full range of responses across the seven-point scale found in each group (Table 10). A similar significant result ($p < .001$) was obtained only when analyzing the junior high school data (Table 11). At the junior high school level, the difference in magnitude showed that the LD group completed in-class assignments but that the LA group completed assignments only "sometimes."

Item 1.14, "Completion of homework," yielded a significant F at the .0001 level. The confidence bands of the means scores did not overlap (Table 12). The LD group completed homework about half the time. The LA group completed homework some of the time. When the junior and senior high school data were analyzed, only the junior high school data yielded a significant result at the .0001 level (Table 13). The mean score confidence bands did not overlap between the LD and LA groups. The magnitude of the difference was one full unit on the seven-point scale. The LD group completed homework "about half the time," whereas the LA group only "sometimes" completed their homework.

A significant ($p = .0001$) difference was found between the LD and LA groups on item 1.15, "Hands in assignments on time." There was no overlap of the two confidence bands of the groups' means (Table 14). Teachers reported that LD and LA students hand in assignments about half the time. When the junior and senior high school data were analyzed separately, the junior high school school data yielded significant results ($p < .0001$) (Table 15). The confidence bands of the groups'

means did not overlap. The magnitude of difference was one scale score unit. The LD group handed in assignments about "half the time." The LA group handed in assignments only "some of the time."

Item 1.17, "Asks for help when appropriate," reached the .0001 level of significance based on the F obtained in the analysis of the combined junior and senior high school data. No overlap resulted between the confidence bands of the groups' mean scores (Table 16). It was found that LD students ask for help when appropriate about half the time. The LA group, as a whole, only sometimes ask for help and when appropriate. Both the junior ($p \leq .0001$) and senior ($p \leq .01$) high school data yielded significant difference and no overlap of the means' confidence bands (Tabes 17 and 18). The magniture of frequency and direction of differences were similar to that of the combined group.

The difference between the LD group and the LA group means was significant at the .0001 level on item 1.18, "Starts work when instructed." The confidence bands of the means of the two groups did not overlap (Table 19). The nearest point for the LD group was "often" compared to "about half the time" for the LA group. Separate analyses of the junior and senior high school data revealed a significant ($p < .0001$) difference only at the junior high school level (Table 20). At this level, the LD group often started work when instructed, but the LA group started work when instructed about half the time.

Item 1.19, "Follows instructions," was found to yield a significant ($p < .001$) mean difference between the LD and LA adolescents. No overlap resulted between the LD and LA groups' mean scores confidence bands (Table 21). A similar significant result ($p = .001$) was obtained when analyzing the junior high school data (Table 22). The perception of the teachers was the same at this level as was the case using combined data.

Item 7.1, "Relationships with authority figures," yielded a significant F at the .0001 level. The confidence bands of the two mean scores did not overlap (Table 23). When the junior and senior high school data were analyzed, only the junior high school data yielded a significant result at the .0001 level (Table 24). The mean score confidence bands did not overlap between the LD and the LA groups. The magnitude of the difference was one full unit on the seven-point scale. The LD junior high school group was perceived as "often" having positive relationships with school authorities and teachers. The LA group was perceived as having these positive relationships "about half the time."

A significant ($p < .0001$) difference was found between the means of the LD and LA groups on item 7.2, "Effects of criticism on subsequent improvement." There was no overlap of the two confidence bands of the groups' means (Table 25). When the junior and senior high school data were analyzed separately, only the junior high school data yielded significant results ($p < .0001$) (Table 26). The confidence bands of the groups' means did not overlap. The magnitude of difference was one scale score unit. The LD group improved about "half the time" after criticism. The LA group "sometimes" improved their performance after criticism.

Item 7.4, "Is appreciative of positive reinforcement," reached the .0001 level of significance based on the F ratio obtained in the analysis of the combined junior-senior high school data. No overlap resulted between the confidence bands of the groups' mean scores (Table 27). The results of the separate analyses of the junior and senior high school data showed that only the junior high school data reached significance ($p < .0001$) and no overlap of the means' confidence bands resulted (Table 28). The LD group "quite often" shows appreciation for positive reinforcement, while the LA group is "often" appreciative of this reinforcement about half the time.

The difference between the LD group and the LA group means was significant at the .01 level on item 7.21, "Subjectively judging time." However, the confidence bands of the two means were found to overlap. Therefore no further analysis or interpretation was done (Table 29).

The difference between the LD group and the LA group means was significant at the .001 level on item 7.22, "Completing tasks correctly within an assigned time limit." The confidence bands of the two means did not overlap (Table 30). Separate analyses of the junior and senior high school data revealed a significant difference ($p < .0001$) only at the junior high school level (Table 31). At this level, the LD group completed tasks correctly within an assigned time limit "about half the time" in contrast to the LA group who sometimes successfully completed the task within the assigned time.

Item 7.28, "Making repetitious mistakes," yielded a significant ($p < .01$) mean difference between the LD and LA adolescents. There was overlap between the LD and LA groups' mean scores confidence bands. No further analysis was required (Table 32).

Item 8.8, "Poor reading rate," resulted in a significant ($p < .0001$) mean difference between the LD and LA adolescents (Table 33). No overlap resulted between the LD and LA groups' mean scores confidence bands. A similar significant result ($p < .0001$) was obtained when analyzing the senior high school data alone (Table 34). The perception of the teachers was that the item reflected the LD group but not the LA group.

Item 8.9, "Poor reading comprehension," yielded a significant F at the .001 level. The confidence bands of the two mean scores did not overlap (Table 35). When the junior and senior high school data were analyzed, only the senior high school data yielded a significant result at the .0001 level (Table 36). The mean score confidence bands did not

overlap. The LD senior high school group members were perceived as more likely to demonstrate poor reading comprehension than the LA group.

A significant ($p < .01$) difference was found between the means of the LD and LA groups on item 8.11,"Recognizing spelling errors" (Table 37). However, the confidence bands of the two means overlapped. No further analysis was conducted.

Emotional and Social Behavior of Youth Attributed by Parents

The parents of LD, LA, and Normal-achieving (NA) youths were asked to respond to a multiattribute question which related to behavior of the adolescents. In total, responses were given to 32 attributes.

The data were grouped and analyzed by: (a) junior and senior high school combined data, (b) junior high school data only, and (c) senior high school data only. The combined data were analyzed first. If significant ($p < .01$) results were obtained and the 98th percent confidence bands of the means overlapped, then the junior high school and senior high school data were analyzed separately. Only those variables which achieved significance in the combined group are presented in the tables. Other variables are listed for the interest of the reader (see Table 89). A difference in the range of responses is noted descriptively.

Of the 36 variables on the parent measure, 27 yielded significant F results at or beyond the .01 level of significance. Each variable will be discussed in its order of presentation on the parent measure and the data using only junior high school students/senior high school students will be summarized.

Item 37.1, "Gets along well with authority figures," was found to yield significant ($p < .0001$) mean score difference among the LD, LA, and NA adolescents. No overlap resulted between LD and NA means or LA and NA means. But an overlap was noted between LD and LA means (Table 38). A similar significant result ($p < .0001$) was obtained, but when analyzing the senior high school data (Table 39). The same overlap pattern as in the combined group was obtained also on the senior high school data. The normal-achieving and LD adolescents were perceived

as "quite often" getting along well with authority figures, whereas LA were perceived as "often" getting along well with authority figures.

Item 37.2, "When criticized, he/she tries very hard to improve," yielded a significant F at the .0001 level. The confidence bands overlapped between the LD and LA groups. The confidence bands did not overlap when comparing the LD group with the NA group or the LA group with the NA group (Table 40). When the junior high school and senior high school data were analyzed, only the senior high school data yielded a significant result (Table 41). The mean scores confidence bands overlapped in the same pattern as the combined data. The LD and NA groups both were perceived by the parents to improve when criticized for performance. The LA group was perceived to improve only "half the time."

A significant ($p \leq .001$ result was found among the means of the LD, LA, and NA groupos on Items 37.3, "When criticized, he/she cannot control his/her emotions" (Table 42). There was no overlap of the means when comparing the LA adolescents with NA adolescents. The confidence bands overlapped when the LD and LA groups and LD and NA groups. When the junior and senior high school data were analyzed separately, only the junior high school data yielded significant results ($p \leq .001$). The pattern of confidence band overlap was not consistent with the combined junior-senior high school results. The confidence bands of the means overlapped when comparing the LD and NA groups. No overlap was noted between the two groups' mean scores when comparing the LD and LA groups or the LA and NA groups. Parents perceived the LD and NA adolescents as having more difficulty in controlling emotions than was the case with the LA group.

Item 37.4, "When praised, he/she is appreciative," reached the .0001 level of significance based on the F value obtained in the analysis of

and NA groups. The results of the analysis of the junior and senior high school combined data showed that only the senior high school data reached significance ($p < .0001$) (Table 44). The confidence band overlap was inconsistent between the combined data and the senior high data. At the senior high level, the confidence of the means overlapped when comparing the LD and LA groups and LD and NA groups. On this item, parents viewed LD and NA senior high youths as "quite often" showing appreciation when praised.

The differences among the group means was significant at the .0001 level on Item 37.5, "When not getting his/her own way, he/she reacts violently" (Table 45). The confidence bands overlapped when comparing the means of the LD and LA groups. No confidence band overlap of mean scores was found when comparing the LD and NA groups. Separate analyses of junior and senior high school data revealed a significant ($p < .001$) difference only at the senior high level (Table 46). An inconsistency in the overlap pattern was found between the combined data and the senior high only data. The confidence bands overlapped for the means of the LD and LA groups and LD and NA groups. No confidence band overlap was noted between the LA and NA groups. Parents perceived all three groups of youths as "rarely" reacting violently when not getting his/her own way.

The difference among the LD, LA, and NA group means was significant at the .01 level on Item 37.6, "He/she is depressed or sad most of the time." The confidence band of the means overlapped when comparing the LD and LA groups and LD and NA groups. The confidence bands of the means did not overlap when comparing the LA and NA groups (Table 47). Separate analyses of the junior-senior high data revealed significant differences ($p < .01$) only at the senior high level (Table 48). The overlap of the combined junior-senior high school data (Table 43). No overlap in the confidence bands of the means was found when comparing the LD and

confidence bands was identical to that of the combined data. Parents of senior high school LD, LA, and NA youths perceived these adolescents as "rarely" being depressed or sad most of the time.

Item 37.8, "When having problems, he/she works them out alone," was found to yield a significant ($p < .001$) difference among the means of the LD, LA, and NA adolescents. No overlap resulted between the means of the LD and NA groups and the LA and NA groups. The mean scores confidence bands overlapped when comparing the LD and LA groups (Table 49). When analyzing the junior and senior high school data separately, no significant differences were found between the three groups.

Item 37.9, "He/she has a temper and explodes easily," yielded a significant F value at the .001 level. The mean scores confidence bands did not overlap when comparing the LD and NA groups and the LA and NA groups. The mean scores confidence bands did overlap when comparing the LD and LA groups (Table 50). When the junior and senior high school data were analyzed, only the senior high data yielded significant results at the .01 level (Table 51). The mean scores confidence bands did not overlap at the senior high level when comparing the LA and NA groups. The mean scores confidence bands did overlap when comparing the LD and LA groups and the LD and NA groups. The parents attributed a temper and exploding easily "sometimes" to LD and LA adolescents. The parents of the NA group perceived their adolescent as "rarely" displaying temper and exploding easily.

A significant difference ($p < .0001$) difference was found among the means of the LD, LA, and NA groups on Item 37.11, "He/she does not stay with a task for more than 5 to 10 minutes without losing interest."

There was no overlap of the confidence bands between the mean scores when comparing the LD and NA groups and the LA and NA groups (Table 52). The confidence bands did overlap for the means obtained for the LD and LA groups. When the junior and senior high school data were analyzed separately, it was found that only the senior high school data yielded a significant result ($p < .0001$). The pattern for confidence bands overlap among the pairs was identical to that for the combined junior-senior high school data (Table 53). The parents of the LD and LA groups perceived their youngsters as "sometimes" not staying with the task 5 to 10 minutes without losing interest. The parents of the NA group "rarely" perceived that their adolescent did not stay with a similar task for the 5 to 10 minute period.

Item 37.12, "He/she acts on impulse without thinking," reached the .0001 level of significance based on the F value obtained in the analysis of the combined junior-senior high school data (Table 54). No overlap resulted between the confidence bands of the groups' mean scores when comparing the LD and NA groups and LA and NA groups. The confidence bands of the mean scores did not overlap when comparing the LD and the LA groups. The results of the separate analyses of the junior and senior high school data showed that only the senior high data reached significance ($p \leq .0001$). The overlap of the confidence bands in pairwise comparisons was identical to the patterns of the combined data (Table 55). Parents of all groups perceived that their adolescent acted on impulse without thinking "some of the time."

The difference among the LD, LA, and NA groups' means was significant at the .0001 level for Item 37.13, "He/she has trouble concentrating." The confidence bands of the means did not overlap when comparing the LD and NA groups and LA and NA groups. The mean scores confidence bands did overlap when comparing the LD and LA groups (Table 56). Separate

analyses of the junior and senior high school data revealed a significant difference ($p < .0001$) only at the senior high school level (Table 57). The overlap of the confidence bands for mean scores among the groups was identical to that of the combined senior high-junior high data. The parents of LD adolescents perceived that the students had trouble concentrating "about half the time." Parents of LA adolescents perceived this group of students to have difficulty concentrating "about half the time" also. Normal-achieving adolescents were perceived by their parents as "rarely" having trouble concentrating.

Item 37.14, "He/she goes along with group values rather than making his/her own decision," was found to yield a significant mean difference ($p < .0001$) among the LD, LA, and NA adolescents. Confidence bands that resulted between the LD and LA groups mean scores overlapped. No such overlap was found when comparing the mean scores of LD and NA groups and LA and NA groups (Table 58). A similar significant result ($p < .0001$) was obtained when analyzing the senior high school data (Table 59). The confidence bands pattern showed that the LD and LA groups' mean scores overlapped as did the LD and NA groups. The confidence bands of the mean scores did not overlap when comparing the LA and NA group. Parents of all groups of adolescents perceived that their child would "sometimes" go along with group values rather than making their own decisions.

Item 37.16, "When given a choice, he/she makes decisions easily," was found to yield a significant ($p < .001$) mean difference among the LD, LA and NA adolescents (Table 60). The mean scores' confidence bands overlapped when comparing the LD and LA groups. The confidence bands of the mean scores did not overlap when comparing the LD and NA groups and LA and NA groups. When analyzing the junior and senior high school data separately, no significant difference was obtained among the three groups.

Item 37.17, "He/she is on time to activities and events," yielded a significant F value at the .001 level. The confidence bands did not overlap when comparing the mean scores of the LD and NA groups and LA and NA groups. The mean scores confidence bands did overlap when comparing scores of the LD and LA groups (Table 61). When the junior and senior high school data were analyzed, the senior high school data yielded a significant result at the .01 level (Table 62). The means scores' confidence bands did not overlap when comparing the LA and NA groups. The confidence bands of the mean scores for the LD and LA groups and LD and NA groups did overlap. The parents of the LD and LA groups perceived their youngsters as being on time to activities and events "often". The parent of the NA adolescent perceived their youngsters as being on time to activities and events "quite often".

Item 37.18 "He/she takes care of belongings", yielded a significant ($p < .01$) mean difference among LD, LA, and NA adolescents. There was overlap in the confidence bands of the mean scores when comparing the LD and LA groups and LD and NA groups. There was no overlap of the mean scores confidence bands when comparing the LA and NA groups (Table 63). When the junior and senior high school data were analyzed, no significant differences resulted.

A significant ($p < .0001$) difference was found among the means of the LD, LA and NA groups on item 37.19, "Given several things to do in a short time, he/she can usually figure out a way to get everything done." There was no overlap of the confidence bands of the mean scores when comparing the LD and NA groups and the LA and NA groups. There was, however, overlap of the mean scores confidence bands when the LD and LA

groups were compared (Table 64). Only the senior high school data yielded a significant result at the .0001 level (Table 65). The pattern of mean scores confidence band overlap was identical to that of the combined junior-senior high school data. The parents of LA and NA adolescents perceived that their youngsters, when given several things to do in a short time, would usually figure a way to get everything done "often". The parents of LD adolescents perceived that under the same conditions, LD youngsters would figure a way to get everything done "half the time".

A significant ($p < .0001$) difference was found among the means of the LD, LA and NA groups on Item 37.20, "When criticized, he/she gets depressed". There was no overlap on the mean scores when comparing the LD and NA groups and LA and NA groups. There was, however, overlap of the confidence bands when comparing the mean scores of the LD and LA groups (Table 66). When the junior and senior high school data were analyzed separately, only the senior high school data yielded significant results ($p = .01$). The confidence bands of all the pairwise comparisons overlapped for the mean scores (Table 67).

Item 37.21, "When given a set of three or four instructions, he/she can comlete them in the right order", reached the .0001 level of significance on the F value obtained in the analyses of the combined junior-senior high school data. No overlap resulted when studying the confidence bands of the groups' mean scores for the LD and NA groups and the LA and NA groups (Table 68). The results of the separate analyses of junior and senior high school data showed that only the senior high school data reached significance ($p < .0001$). The overlap pattern was identical

to that described on the combined junior-senior high school data (Table 69). The parents of LD and LA adolescents perceived their child as carrying out a set of three or four instructions in the right order "about half the time". The NA groups' parents perceived their adolescents as meeting this same task "quite often".

The difference among the LD, LA and NA groups means was significant at the .0001 level of significance on Item 37.22, "He/she can judge about how much time has passed without a watch". The mean scores confidence bands did not overlap when comparing the LD and NA groups and the LA and NA groups. The confidence bands did overlap when comparing the mean scores of the LD and LA groups (Table 70). Separate analyses of the junior and senior high school data revealed a significant ($p < .0001$) difference only at the senior high level (Table 71). The confidence band overlap pattern was identical to the combined junior-senior high school data. Parents of LD and LA adolescents perceived their son/daughter as judging about how much time had passed without a watch "about half the time". Parents of the NA group perceived that their youngster could "often" judge about how much time had passed without a watch.

Item 37.23, "When given a task to complete by a deadline, he/she does the work correctly and on time", revealed a significant ($p < .0001$) mean difference among the LD, LA, and NA adolescents. The confidence bands of the scores did not overlap when comparing the LD and NA groups and the LA and NA groups. The confidence bands for the mean scores did, however, overlap when comparing the scores of the LD and LA gorups (Table 72). A similar significant result ($p < .0001$) was obtained when analyzing the senior high school data (Table 73). The overlap of the mean scores confidence bands was

identical to that of the combined junior-senior high school data. The parents of LD and LA adolescents perceived that "about half the time" when given a task to complete and the deadline that the adolescent did the work correctly and on time. Parents of NA adolescents felt that their child "often" was able to complete the task correctly and meet the deadline.

Item 37.24, "He/she anticipates events and gets ready for them", yielded a significant F value at the .0001 level of significance. The mean scores confidence bands did not overlap when comparing the LD and NA groups and LA and NA groups. The confidence bands did, however, overlap when comparing the LD and LA groups (Table 74). When the junior and senior high school data were analyzed, only the senior high school data yielded a significant result at the .0001 level (Table 75). The same pattern as noted on the combined junior-senior high school data was obtained when evaluating the mean scores confidence bands. The parents of LD and LA adolescents perceived that "about half the time" their child anticipated events and got ready for them. NA youngsters, on the other hand, "often" anticipated events and got ready for them.

Item 37.25, "He/she forgets easily", reached the .0001 level of significance based on the F value obtained based on the analysis of the combined junior-senior high school data. No overlap was noted when comparing the mean scores confidence bands of the LD and NA groups and LA and NA groups. The confidence bands did overlap when comparing the scores of the LD and LA groups (Table 76). The results of the separate analyses of the junior and senior high school data showed only the senior high school data reached significant ($p < .0001$) level. The pattern of overlap of the confidence

bands was identical to that of the combined junior-senior school data. Parents of all three groups of adolescents perceived their youngsters as forgetting easily "some of the time".

Item 37.26, "He/she is well coordinated", was found to yield a significant ($p < .0001$) mean difference on LD, LA and NA adolescents. No overlap of confidence bands was found when comparing the mean scores of the LD and NA scores and the LA and NA scores. The confidence bands did overlap when comparing the mean scores of the LD and LA groups (Table 78). Similar significant reulsts ($p < .0001$) was obtained, but only when analyzing the senior high school data (Table 79). The pattern of confidence bands overlap was identical to that obtained on the junior-senior high school data. Parents of LD and LA adolescents perceived their child as "often" being well coordinated. Parents of normal-achieving adolescents perceived their youngsters as "quite often" being well coordinated.

Item 37.28, "He/she has trouble verbally expressing his/her thoughts", yielded significance at the .0001 level. The confidence bands did not overlap when comparing the mean scores of the LD and NA groups and LA and NA groups. The confidence bands did, however, overlap when comparing the mean scores of the LD and LA groups (Table 80). When the junior and senior high school data were analyzed, only the senior high data yielded a significant result at the .0001 level (Table 81). The confidence bands did not overlap when comparing the mean scores of the LD and NA groups. The confidence bands did overlap when comparing the mean scores of the LD and LA groups and the LA and NA groups at the senior high school

level. Parents of LD and LA adolescents perceived their youngsters as having problems with verbal expressions of their thoughts "Sometimes". Parents of NA adolescents perceived them as "rarely" having problems verbally expressing thoughts.

A significant ($p < .0001$) difference was found among the means of the LD, LA and NA groups on Item 37.29, "He/she misinterprets what others say". The confidence bands of the mean scores did not overlap when comparing scores for the LD and NA groups and the LA and NA groups. The confidence bands did overlap when comparing the mean scores of the LD and LA groups (Table 82). When the junior and senior high school data were analyzed separately, it was found that only the senior high school data yielded significant results ($p < .001$). The pattern of the confidence bands was identical to that of the combined junior-senior high school data (Table 83). Parents of LD and LA adolescents perceived that "sometimes" their youths misinterpreted what other people say. Parents of NA adolescents perceived that only "rarely" does their child misinterpret what other people say.

Item 37.30, "He/she has trouble learning from experience and may make the same mistake over and over", reached the .0001 level of significance on the F value obtained in the anlysis of the combined junior-senior high school data. No overlap of the confidence bands was noted when comparing mean scores of the LD and NA groups and the LA and NA groups. The confidence bands did overlap when comparing the mean scores of the LD and LA groups (Table 84). The results of the separate analysis of the junior and senior high school data showed that only the senior high school data reached significance ($p < .0001$). The confidence bands overlap pattern was identical to

that obtained on the combined junior-senior high school data (Table 85). Parents of LD and LA adolescents perceived that sometimes their son/daughter repeated errors without resolve. Parents of NA adolescents perceived that it was only "rarely" that their son/daughter committed error repetitions without resolve.

The difference among the LD, LA and NA groups' means was significant at the .0001 level on Item 37.32, "He/she is socially assured." The confidence bands did not overlap when comparing the mean scores of the LD and NA groups and the LA and NA groups. The confidence bands did, however, overlap when comparing the mean scores of the LD and LA groups (Table 86). Separate analyses of the junior and senior high school data revealed a significant $p < .0001$) difference only at the senior high school level (Table 87). The senior high confidence band overlap pattern was identical to the combined junior-senior high school data. Parents of LD and LA adolescents perceived that "about half the time" their son/daughter was socially assured. Parents of NA adolescents perceived their son/daughter as "often" socially assured.

Discussion

The results of this study of teachers' perception of LD and LA adolescents' behavior and parents' perception of behaviors among LD, LA, and NA adolescents revealed an interesting contrast. Teachers perceived quantitative differences between LD and LA adolescents, most notably at the junior high school level. Conversely, the parents' perception of LD, LA and NA adolescents' behavior revealed that no differences were noted between LD and LA adolescents. The differences that did exist between the parents' perceptions of their adolescents were between the NA group and the LD and LA groups, but only at the senior high school level. This parent result at the senior high school level could be attributed to the methodology of the study, i.e., parents of NA were only included at the senior high level.

The teachers perceived the LD junior high school adolescents more positively than their LA peers on the following social behaviors: brings materials to class, speaks courteously to teacher, pays attention to lecture or discussion, completes in-class assignments, completes home assignments, hands in assignments on time, asks for help when appropriate, starts work when instructed, follows instructions, gets along well with authority figures, tries hard to improve when criticized, is appreciative of praise, and meets task deadlines with satisfactory products. Perceptions of these behaviors ranged from "sometimes" to "often." The extremes of behavior, either negative or positive, are <u>not</u> attributed to the LD junior high school youth.

On the other hand, LD junior high school students are perceived as less competent than LA students of the same level on the following academic

type behaviors: making more repetitions, mistakes and recognizing spelling errors.

At the senior high school level, only two academic behaviors were perceived by regular classroom teachers as differentiating the LD and LA students. They are excessively slow rate of reading and very poor reading comprehension. The LD senior high students were perceived as academically inferior to the LA adolescents. No differences were noted in the social or coping skills between LD and LA senior high school youths.

Both research questions posed at the inception of this study can be answered affirmatively. The teachers did perceive both the junior high school and senior high school LD adolescents as displaying differentiating behaviors. However, at the junior high school level, the differences between the LD and LA groups were generalized across areas of behavior. Senior high school LD and LA students were differentiated only on the regular classroom teachers' perception of academic behaviors.

The perceptions of parents of LD and LA secondary students were not notably different. However, the perceptions of parents of NA senior high school students were generally more positive across the rating measure. Data from parents of NA youth at the junior high school level were not available.

It can be concluded that the LD junior and senior high school students are perceived as having more serious academic/cognitive difficulties than their LA peers. However, the classroom social behaviors and skills needed to cope with the demands of the junior high school regular classroom favor the LD adolescent.

The parents' perceptions of their LD adolescent at the junior high and senior high school levels were similar to perceptions provided by

parents of LA youths. The major differences occur between the perceptions of NA adolescents' parents and those of the LD and LA adolescents' parents. The perceived behavioral differences generalized across the parent perception assessment measure. Across the 32 variables the NA parents perceived their sons/daughters with superior ratings to those of parents of LD and LA adolescents, regardless of the nature of the response, i.e., coping with school demands, emotional/social maturity, and cognitive sophistication.

Several conclusions can be made from the findings of this study. First, across the secondary school levels teachers perceive LD students as exhibiting inferior performance, both academically and cognitively. This perception appears to be accurate, based on numerous findings published in the field of LD and the criteria that is nationally used to identify LD students.

Second, only junior high school teachers perceive the LD students as socially/emotionally superior to LA students and more able to cope with the demands of the classroom. The perceptions of LD and LA adolescents' parents do not confirm this finding. The superiority of the LD junior high school students was not confirmed at the senior high school level. It may well be that the demands of the senior high school are at a level that the LD adolescent cannot attain irrespective of efforts.

Third, the social/emotional behaviors, academic/cognitive achievements, and ability to cope with classroom/school demands of the LD and LA adolescents appear to be inferior to those of NA students. This statement can be inferred from data obtained from parents' perceptions and frequency of behaviors noted on the teacher perception assessment.

This conclusion is in agreement with previous studies of Bryan and her associates (1978), and a finding that has been presented when studying exceptional children and youth.

The LD adolescent requires interventions to enhance academic, cognitive, social and coping skills to more adequately function with their NA peers. The enhancement skills should include cognitive, social and school coping skills in addition to the obvious academic interventions (Bryan, 1978).

References

Bendell, D., Tollefson, N., and Fine, M. Interaction of locus-of-control orientation and the performance of learning disabled adolescents. Journal of Learning Disabilities, 1980, 13, 83-86.

Bryan, T. H. Social relationships of verbal interactions of learning disabled children. Journal of Learning Disabilities, 1978, 11, 107-115.

California State Department of Education. The Education of Emotionally Handicapped Children. Sacramento: California State Department of Education, 1961.

Deshler, D. D., Alley, G. R., Mellard, D. F. & Warner, M.M. The Homogeneity of Identification Decisions by Different Groups on LD Adolescents (Research Report No. 9). Lawrence, Kansas: The University of Kansas Institute for Research in Learning Disabilities, 1980.

Freud, S. Analysis of a phobia in a five year old boy, 1909. In Collected Works of Sigmund Freud, Vol. 10, London: Hogarth Press, 1955.

Hewitt, L. E., & Jenkins, R.L. Fundamental patterns of maladjustment: The dynamics of their origin. Springfield, Illinois: State of Illinois, 1945.

Kirk, S.A. Educating exceptional children, 2nd ed. Boston: Houghton-Mifflin Co., 1972.

Kvaraceus, W. C. Juvenile delinquency: What research says to the teacher, No. 15. Washington: American Educational Research Association, 1958.

McCarthy, J. M. & Paraskevopoulos, J. Behavior patterns of learning disabled, emotionally disturbed, and average children. Exceptional Children, 1969, 36, 69-74.

Morse, W., Cutler, R. L., & Fink, A. H. Public school classes for the emotionally handicapped: A research analysis. Arlington: The Council for Exceptional Children, 1964.

Pearl, R., Bryan, T., & Donahue, M. Learning disabled children's attributions for success and failure. Learning Disability Quarterly, 1980, 3, 3-9.

Quay, H. C., Morse, W., & Cutler, R. L. Personality patterns of pupils in special classes for the emotionally disturbed. Exceptional Children, 1966, 32, 297-301.

Rimland, B. Infantile autism, the syndrome and its implications for a neural theory of behavior. New York: Appleton-Century-Crofts, 1964.

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TABLE 1

Bring materials to class among combined junior and senior high school students.

Teacher Question: Brings required materials (to class)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	5.045	4.401	No
Response	SD	1.708	1.719	
(Jr. & Sr. High)	Range	1-7	1-7	
	n	198	197	
		F = 13.9675		

$P < .001$

TABLE 2

Bring materials to class among junior high school students

Teacher Question: Bring required materials (to class)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	5.359	4.263	LD/LA NO
Response	SD	1.587	1.626	
Jr. High	Range	1-7	1-7	
	n	92	95	
		F= 21.7293		

$p < .0001$

TABLE 3

Aggressive toward peers among combined junior and senior high school students

Teacher Question: Engages in physical aggression with peers

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	1.710	2.015	Yes
Response	SD	1.115	1.356	
(Jr. & Sr. High)	Range	1-7	1-6	
	n	200	194	
		F= 5.9820		

$p < .01$

TABLE 4

Salutation among combined junior and senior high school students

Teacher Question: Greets you

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.443	3.783	No
Response	SD	1.995	1.782	
Jr. & Sr. High	Range	1-7	1-7	
	n	203	198	
		F= 12.2039		

$p < .001$

TABLE 5

Salutation among senior high school students

Teacher Question: Greets you

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.523	3.833	LD/LA Yes
Response	SD	2.012	1.752	
Sr. High	Range	1-7	1-7	
	n	109	102	
		F= 7.0047		

$p < .01$

TABLE 6

Courtesy among combined junior and senior high school students

Teacher Question: Speaks courteously to you

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	5.874	5.342	NO
Response	SD	1.508	1.578	
Jr. & Sr. High	Range	1-7	1-7	
	n	198	190	
		F= 11.5151		

$p < .001$

TABLE 7

Courtesy among junior high school students

Teacher Question: Speaks courteously to you

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	6.075	5.172	No
Response	SD	1.375	1.479	
Jr. High	Range	2-7	1-7	
	n	93	93	
		F= 19.1909		

$p < .0001$

TABLE 8

Attention to lecture or class discussion among combined junior and senior high school students

Teacher Question: Pays attention to lecture or discussion

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.446	3.834	No
Response	SD	1.624	1.480	
Jr. & Sr. High	Range	1-7	1-7	
	n	202	193	
		F= 15.2505		

$p < .0001$

TABLE 9

Attention to lecture or class discussion among junior high school students

Teacher Question: Pays attention to lecture or discussion

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.688	3.521	NO
Response	SD	1.588	1.420	
Jr. High	Range	1-7	1-7	
	n	93	94	
		F= 28.0777		

$p < .0001$

TABLE 10

Completion of in-class assignments among combined junior and senior high school students

Teacher Question: Completes in-class assignments

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.199	3.694	No
Response	SD	1.631	1.715	
Jr. & Sr. High	Range	1-7	1-7	
	n	201	196	
		F= 9.0455		

$P < .01$

TABLE 11

Completion of in-class assignments among junior high school students

Teacher Question: Completes in-class assignemts

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.323	3.458	NO
Response	SD	1.623	1.628	
Jr. High	Range	1-7	1-7	
	n	93	96	
		F= 13.3520		

$P < .001$

TABLE 12

Completion of homework among combined junior and senior high school students

Teacher Question: Completes homework assignments

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.061	3.235	NO
Response	SD	1.850	1.598	
Jr. & Sr. High	Range	1-7	1-7	
	n	181	183	
		F= 20.7764		

$p < .0001$

TABLE 13

Completion fo homework among junior high school students

Teacher Question: Completes homework assignments

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.084	2.978	NO
Response	SD	1.816	1.467	
Jr. High	Range	1-7	1-7	
	n	83	92	
		F= 19.8024		

$p < .0001$

TABLE 14

Meets time demands of assignments among combined junior and senior high school students

Teacher Question: Hands in assignments on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.258	3.596	NO
Response	SD	1.681	1.588	
Jr. & Sr. High	Range	1-7	1-7	
	n	194	193	
		F= 15.8489		

$p = .0001$

TABLE 15

Meets time demands of assignments among junior high school students

Teacher Question: Hands in assignments on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.448	3.387	NO
Response	SD	1.598	1.460	
Jr. High	Range	1-7	1-7	
	n	87	93	
		F= 21.6806		

$p < .0001$

TABLE 16

Interdependence on teacher among combined junior and senior high school students

Teacher Question: Asks for help when appropriate

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	3.910	3.021	NO
Response	SD	1.715	1.626	
Jr. & Sr. High	Range	1-7	1-7	
	n	199	193	
		F= 27.6871		

$p < .0001$

TABLE 17

Interdependence on teacher among junior high school students

Teacher Question: Asks for help when appropriate

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.022	2.912	NO
Response	SD	1.779	1.506	
Jr. High	Range	1-7	1-6	
	n	92	95	
		F=	21.0974	

$p < .0001$

TABLE 18

Interdependence on teacher among senior high school students

Teacher Question: Asks for help when appropriate

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	3.814	3.122	NO
Response	SD	1.660	1.737	
Sr. High	Range	1-7	1-7	
	n	107	98	
		F= 8.4693		

$p < .01$

TABLE 19

Responsiveness to instructions among combined junior and senior high school students

Teacher Question: Starts work when instructed

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.513	3.769	NO
Response	SD	1.678	1.610	
Jr. & Sr. High	Range	1-7	1-7	
	n	199	195	
		F= 20.1187		

$p < .0001$

TABLE 20

Responsiveness to instructions among junior high school students

Teacher Question: Starts work when instructed

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.652	3.552	NO
Response	SD	1.593	1.555	
Jr. High	Range	1-7	1-7	
	n	92	96	
		F= 22.9582		

$p < .0001$

TABLE 21

Frequency following directions among combined junior and senior high sxhool students

Teacher Question: Follow instructions

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	4.533	4.000	NO
Response	SD	1.546	1.486	
Jr. & Sr. High	Range	1-7	1-7	
	n	199	194	
		F= 12.1150		

$p < .001$

TABLE 22

Frequency following directions among junior high school students

Teacher Question: Follow instructions

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.570	3.830	NO
Response	SD	1.611	1.411	
Jr. High	Range	1-7	1-7	
	n	93	94	
		F= 11.1709		

P = .001

TABLE 23

Relationships with school authorities among combined junior and senior high school students

Teacher Question: He/she gets along well with school authority figures (teachers, principal, etc.).

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	5.298	4.547	NO
Response	SD	1.392	1.526	
Jr. & Sr. High	Range	2-7	1-7	
	n	191	179	
		F= 24.5106		

$p < .0001$

TABLE 24

Relationships with school authoritites among junior high school students

Teacher Question: He/she gets along well with school authority figures (teachers, principal, etc.).

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	5.402	4.284	NO
Response	SD	1.333	1.485	
Jr. High	Range	2-7	2-7	
	n	87	88	
		F= 27.4452		

$p < .0001$

TABLE 25

Effects of feedback on subsequent improvement by teachers on behavior of combined junior and senior high school students

Teacher Question: When criticized, he/she tries very hard to improve.

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.325	3.527	NO
Response	SD	1.624	1.614	
Jr. & Sr. High	Range	1-7	1-7	
	n	197	182	
		F= 22.9396		

$p < .0001$

TABLE 26

Effects of feedback on subsequent improvement by teachers on behavior of junior high school students

Teacher Question: When criticized, he/she tries very hard to improve.

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	4.447	3.233	NO
Response	SD	1.584	1.514	
Jr. High	Range	1-7	1-7	
	n	94	90	
		F= 28.1756		

$p < .0001$

TABLE 27

Appreciates positive reinforcement among combined junior and senior high school students

Teacher Question: When praised, he/she is appreciative

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	5.432	4.659	NO
Response	SD	1.513	1.589	
Jr. & Sr. High	Range	2-7	1-7	
	n	192	182	
		F= 23.2279		

$p < .0001$

TABLE 28

Appreciates posititve reinforcement among combined junior high school students

Teacher Question: When praised, he/she is appreciative

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	5.600	4.407	NO
Response	SD	1.452	1.604	
Jr. High	Range	2-7	1-7	
	n	90	91	
		F= 26.8544		

$P < .0001$

TABLE 29

Judgement of time among combined junior and senior high school students

Teacher Question: He/she can judge about how much time has passed without a watch

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	3.400	3.931	Yes
Response	SD	1.362	1.530	
Jr. & Sr. High	Range	1-7	1-7	
	n	115	102	
		F= 7.3229		

$p < .01$

TABLE 30

Frequency of completing tasks by assigned time among combined junior and senior high school students

Teacher Question: When given a task to complete and a deadline he/she does the work correctly and on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	3.622	3.089	NO
Response	SD	1.583	1.493	
Jr. & Sr. High	Range	1-7	1-7	
	n	193	191	
		F= 11.5025		

$p < .001$

TABLE 31

Frequency of completing tasks by assigned time among junior high school students

Teacher Question: When given a task to complete and a deadline, he/she does the work correctly and on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	3.716	2.772	NO
Response	SD	1.568	1.376	
Jr. High	Range	1-7	1-7	
	n	88	92	
		F= 18.4848		

$P < .0001$

TABLE 32

Frequency of repetetious mistakes among combined junior and senior high school students

Teacher Question: He/she has trouble learning from experience and may make the same mistakes over and over

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	3.473	3.913	Yes
Response	SD	1.456	1.559	
Jr. & Sr. High	Range	1-7	1-7	
	n	169	161	
		F= 7.0181		

$p < .01$

TABLE 33

Poor reading rate among combined junior and senior high school students

Teacher Question: His/her rate of reading is excessively slow (e.g., he/she is the last student to finish a reading assignment)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\overline{X}$	1.715	1.467	NO
Response	SD	0.453	0.501	
Jr. & Sr. High	Range	1-2	1-2	
	n	158	150	
		F= 20.9200		

$p < .0001$

TABLE 34

Poor reading rate among senior high school students

Teacher Question: His/her rate of reading is excessively slow (e.g., he/she is the last student to finish a reading assignment).

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	$\bar{X}$	1.725	1.387	NO
Response	SD	0.449	0.490	
Sr. High	Range	1-2	1-2	
	n	91	75	
		F= 21.5236		

$P < .0001$

TABLE 35

Very poor reading comprehension among combined junior and senior high school students

Teacher Question: His/her reading comprehension is very poor (e.g., he/she must re-read material to find answers to review questions; "forgets" main idea of stories, etc.)

NO	YES
1	2

		LD	LA	Overlap
Teacher	$\overline{X}$	1.820	1.642	NO
Response	SD	0.385	0.481	
Jr. & Sr. High	Range	1-2	1-2	
	n	150	151	
		F= 12.4902		

$p < .001$

TABLE 36

Very poor reading comprehension among senior high school students

Teacher Question: His/her reading comprehension is very poor (e.g., he/she re-read material to find answers to review questions; "forgets" main idea of stories, etc.)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

		LD	LA	Overlap
Teacher	X	1.831	1.526	NO
Response	SD	0.377	0.503	
Sr. High	Range	1-2	1-2	
	n	83	76	
		F= 18.9452		

$p < .0001$

TABLE 37

Recognizing spelling errors among combined junior and senior high school students

Teacher Question: Has difficulty in recognizing incorrect spelling of words

NO	YES
1	2

		LD	LA	Overlap
Teacher	$\overline{X}$	1.833	1.684	Yes
Response	SD	0.374	0.476	
Jr. & Sr. High	Range	1-2	1-2	
	n	132	133	
		F= 8.2315		

$p < .01$

TABLE 38

Relative frequency of positive relationship with authority figures among junior and senior high school LD, LA and NA youths

Parent Question: 37.1 He/she gets along well with authority figures (parents, teachers, principal, etc.)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\bar{X}$	5.494	5.113	6.191	LD/LA: Yes
SD	1.396	1.435	0.939	LD/NA: No
RANGE	1-7	2-7	1-7	LA/NA: No
n	160	141	183	
	F = 31.1057			

$p < .0001$

TABLE 39

Relative frequency of positive relationship with authority figures among senior high school LD, LA and NA youth

Parent Question: 37.1 He/she gets along well with authority figures (parents, teachers, principal, etc.)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\bar{X}$	5.526	5.164	6.191	LD/LA: Yes
SD	1.311	1.399	0.939	LD/NA: No
RANGE	2-7	2-7	1-7	LA/NA: No
n	76	67	183	
	F = 23.3833			

$p < .0001$

TABLE 40

Frequency of trying to imprice after criticism of performance among junior and senior high school LD, LA and NA youths

Parent Question: 37.2 When criticized, he/she tries very hard to improve

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.621	4.291	5.437	LD/LA: Yes
SD	1.496	1.547	1.188	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	161	141	183	
	F = 29.2953			

$p < .0001$

TABLE 41

Frequency of trying to improve after criticism of performance among senior high school LD, LA and NA youth

Parent Question: 37.2 When criticized, he/she tries very hard to improve

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.740	4.258	5.437	LD/LA: Yes
SD	1.390	1.611	1.188	LD/NA: No
RANGE	2-7	1-7	2-7	LA/NA: No
n	77	66	183	
	F = 21.4904			

$p < .0001$

TABLE 42

Frequency of not controlling emotional outbursts when criticized for performance among junior and senior high school LD,LA and NA youth

Parent Question: 37.3 When criticized he/she can not control his/her emotions (e.g. cries, screams, has temper outbursts).

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	2.331	2.725	2.131	LD/LA: Yes
SD	1.346	1.659	1.206	LD/NA: Yes
RANGE	1-7	1-7	1-7	LA/NA: No
n	157	142	183	
		F = 7.3204		

$p < .001$

TABLE 43

Frequency of displaying appreciation associated with praise among junior and senior high school LA, LA and NA youth

Parent Question: 37.4 When praised, he/she is appreciative

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	5.987	5.496	6.180	LD/LA:	No
SD	1.335	1.611	1.019	LD/NA:	Yes
RANGE	1-7	1-7	2-7	LA/NA:	No
n	158	141	183		
	F = 11.0527				

$p < .0001$

TABLE 44

Frequency of displaying appreciation associated with praise among senior high school LD, LA and NA youth

Parent Question: 37.4 When praised, he/she is appreciative

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	6.039	5.448	6.180	LD/LA:	Yes
SD	1.351	1.459	1.019	LD/NA:	Yes
RANGE	1-7	2-7	2-7	LA/NA:	No
n	76	67	183		
	F = 9.1739				

p = .0001

TABLE 45

Frequency of reacting violently when unable to "get their own way" among junior and senior high school LD, LA and NA youth

Parent Question: 37.5 When not getting his/her own way, he/she reacts violently (crying , screaming, tantrums)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	1.969	2.149	1.536	LD/LA: Yes
SD	1.265	1.331	0.790	LD/NA: No
RANGE	1-7	1-7	1-6	LA/NA: No
n	159	141	183	
	F = 12.8584			

$p < .0001$

TABLE 46

Frequency of reacting violently when unable to "get their own way" among senior high school LD, LA and NA youth

Parent Question: 37.5 When not getting his/her own way, he/she reacts violently (crying, screaming, tantrums)

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	1.829	2.090	1.536	LD/LA: Yes
SD	1.063	1.276	0.790	LD/NA: Yes
RANGE	1-6	1-7	1-6	LA/NA: No
n	76	67	183	
		F = 8.5983		

$P < .001$

TABLE 47

Frequency of depressed effect or sadness among junior and senior high school LD, LA and NA youth

Parent Question: 37.6 He/she is depressed or sad most of the time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	2.307	2.410	2.060	LD/LA: Yes
SD	1.008	1.099	0.663	LD/NA: Yes
RANGE	1-7	1-6	1-5	LA/NA: No
n	163	144	184	
		F = 6.3309		

$p < .01$

TABLE 48

Frequency of depressed effect or sadness among senior high school LD, LA and NA youth

Parent Question: 37.6 He/she is depressed or sad most of the time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	2.253	2.441	2.060	LD/LA: Yes
SD	1.050	1.098	0.663	LD/NA: Yes
RANGE	1-7	1-6	1-5	LA/NA: No
n	79	68	184	
		F = 5.1006		

$p < .01$

TABLE 49

Frequency of self-solving own problems among junior and senior high school LD, LA and NA youth

Parent Question: 37.8 When having problems, he/she works them out alone

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\bar{X}$	4.162	4.086	4.689	LD/LA: Yes
SD	1.556	1.468	1.333	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	142	162	183	
	F = 8.8856			

$p < .001$

TABLE 50

Frequency of low tolerance for frustration followed by emotional outbursts among junior and senior high school LD, LA and NA youth

Parent Question: 37.9 He/she has a temper and explodes easily

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	2.801	3.021	2.413	LD/LA: Yes
SD	1.444	1.603	1.063	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	161	143	184	
	F = 8.3996			

$p < .001$

TABLE 51

Frequency of low tolerance for frustration followed by emotional outburst among senior high school LD, LA and NA youth

Parent Question: 37.9 He/she has a temper and explodes easily

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	2.636	3.030	2.413	LD/LA: Yes
SD	1.276	1.595	1.063	LD/NA: Yes
RANGE	1-7	1-7	1-7	LA/NA: No
n	77	67	184	
	F = 6.1590			

$p < .01$

TABLE 52

Frequency of demonstrating short attention span and persistence among junior and senior high school LD, LA and NA youth

Parent Question: 37.11 He/she does not stay with a task for more than 5-10 minutes without losing interest

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.093	3.213	1.983	LD/LA: Yes
SD	1.572	1.418	0.904	LD/NA: No
RANGE	1-7	1-7	1-6	LA/NA: No
n	162	141	181	
		F = 45.0919		

$p < .0001$

TABLE 53

Frequency of demonstrating short attention span and persistence among senior high school LD, LA and NA youth

Parent Question: 37.11 He/she does not stay with a task for more than 5-10 minutes without losing interest

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\bar{X}$	2.808	2.894	1.983	LD/LA: Yes
SD	1.349	1.337	0.904	LD/NA: No
RANGE	1-7	1-7	1-6	LA/NA: No
n	78	66	181	
	F = 23.9927			

$p < .0001$

TABLE 54

Frequency of impulsive behavior among junior and senior high school LD, LA and NA youth

Parent Question: 37.12 He/she acts on impulse without thinking

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.317	3.401	2.503	LD/LA: Yes
SD	1.385	1.539	1.053	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: NO
n	161	142	183	
		F = 23.9841		

$P < .0001$

TABLE 55

Frequency of impulsive behavior among senior high school LD, LA and NA youth

Parent Question: 37.12 He/she acts on impulse with thinking

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.115	3.162	2.503	LD/LA: Yes
SD	1.259	1.452	1.053	LD/NA: No
RANGE	1-6	1-7	1-7	LA/NA: No
n	78	68	183	
	F = 11.4808			

$p < .0001$

TABLE 56

Frequency of concentrating on task among junior and senior high school LD, LA and NA youths

Parent Question: 37.13 He/she has trouble concentrating

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.745	3.754	2.451	LD/LA: Yes
SD	1.492	1.625	0.985	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	161	142	184	
	F = 51.4994			

$p < .0001$

TABLE 57

Frequency of concentrating on task among senior high school LD, LA and NA youths

Parent Question: 37.13 He/she has trouble concentrating

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.718	3.529	2.451	LD/LA:Yes
SD	1.467	1.643	0.985	LD/NA:No
RANGE	1-6	1-7	1-7	LA/NA:No
n	78	68	184	
	F = 35.6936			

$p < .0001$

TABLE 58

Frequency of adopting group values rather than own decisions among junior and senior high school LD, LA and NA youth

Parent Question: 37.14 He/she goes along with group values rather than making own decisions

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.276	3.690	2.617	LD/LA:Yes
SD	1.385	1.642	1.003	LD/NA:No
RANGE	1-7	1-7	1-6	LA/NA:No
n	163	142	183	
	F = 26.6069			

$P < .0001$

TABLE 59

Frequency of adopting group values rather than own decisions among senior high school LD, LA and NA youth

Parent Question: 37.14 He/she goes along with group values rather than making own decisions.

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.063	3.368	2.617	LD/LA: Yes
SD	1.399	1.515	1.003	LD/NA: Yes
RANGE	1-6	1-7	1-6	LA/NA: No
n	79	68	183	
	F = 10.4951			

$p < .0001$

TABLE 60

Frequency of ease of making decisions based on own choice of options among junior and senior high school LA, LA and NA youth

Parent Question: 37.16 When given a choice, he/she makes decisions easily

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.522	4.517	5.027	LD/LA:Yes
SD	1.423	1.448	1.212	LD/NA:No
RANGE	1-7	1-7	2-7	LA/NA:No
n	161	143	184	
		F = 8.0355		

$p < .001$

TABLE 61

Frequency of promptness at appointed hour of activity among junior and senior high school LD, LA and NA youth

Parent Question: 37.17 He/she is on time to activities and events

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	5.395	5.210	5.836	LD/LA: Yes
SD	1.597	1.467	1.198	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	162	143	183	
	F = 8.5531			

$P < .001$

TABLE 62

Frequency of promptness at appointed hour of activity among senior high school LD, LA and NA youth

Parent Question: 37.17 He/she is on time to activities and events

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	5.333	5.250	5.836	LD/LA: Yes
SD	1.649	1.490	1.198	LD/NA: Yes
RANGE	1-7	2-7	2-7	LA/NA: No
n	78	68	183	
	F = 6.3363			

$p < .01$

TABLE 63

Frequency of caring for personal effects among junior and senior high school LD, LA and NA youth

Parent Question: 37.18 He/she takes care of belongings

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.785	4.521	5.168	LD/LA: Yes
SD	1.794	1.730	1.425	LD/NA: Yes
RANGE	1-7	1-7	1-7	LA/NA: No
n	163	144	184	
	F = 6.4541			

$p < .01$

TABLE 64

Frequency of organizing activities appropriately under time demanded among junior and senior high school LD, LA and NA youth

Parent Question: 37.19 Given several things to do in a short time, he/she can usually figure out a way to get everything done

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\bar{X}$	3.981	4.182	5.299	LD/LA:Yes
SD	1.703	1.595	1.311	LD/NA:No
RANGE	1-7	1-7	2-7	LA/NA:No
n	162	143	184	
	F = 37.1794			

$p < .0001$

TABLE 65

Frequency of organizing activities appropriately under time demanded among senior high school LD, LA and NA youth

Parent Question: 37.19 Given several things to do in a short time, he/she can usually figure out a way to get everything done

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.949	4.507	5.299	LD/LA:Yes
SD	1.611	1.700	1.311	LD/NA:No
RANGE	1-7	1-7	2-7	LA/NA:No
n	78	67	184	
	F = 24.9566			

$p < .0001$

TABLE 66

Frequency of depression associated with criticizism among junior and senior high school LD, LA and NA youth

Parent Question: 37.20 When criticized, he/she gets depressed

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.344	3.392	2.770	LD/LA: Yes
SD	1.471	1.449	1.100	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	160	143	183	
	F = 11.3899			

$p < .0001$

TABLE 67

Frequency of depression associated with criticizism among senior high school LD, LA and NA youth

Parent Question: 37.20 When criticized, he/she gets depressed

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA
$\overline{X}$	3.182	3.176	2.770
SD	1.374	1.392	1.110
RANGE	1-7	1-7	1-7
n	77	68	183
	F = 4.4507		

Overlap	
LD/LA:	Yes
LD/NA:	Yes
LA/NA:	Yes

P = .01

TABLE 68

Frequency of following directions according to prescribed sequence among junior and senior high school LD, LA and NA youth

Parent Question: 37.21 When given a set of three or four instructions, he/she can complete them in the right order

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.196	4.101	5.913	LD/LA: Yes
SD	1.570	1.481	1.164	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	158	138	183	
		F = 89.4752		

$p < .0001$

TABLE 69

Frequency of following directions according to prescribed sequence among senior high school LD, LA and NA youth

Parent Question: 37.21 When given a set of three or four instructions, he/she can complete them in the right order

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.182	4.406	5.913	LD/LA: Yes
SD	1.551	1.571	1.164	LD/NA: No
RANGE	1-7	2-7	2-7	LA/NA: No
n	77	64	183	
	F = 59.4212			

$p < .0001$

TABLE 70

Frequency of correctness in judgment of passage of time among junior and senior high school LD, LA and NA youth

Parent Question: 37.22 He/she can judge about how much time has passed without a watch

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.013	3.986	4.933	LD/LA: Yes
SD	1.672	1.445	1.456	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	157	139	179	
	F = 20.8204			

$p < .0001$

TABLE 71

Frequency of correctness in judgment of passage of time among senior high school LD, LA and NA youth

Parent Question: 37.22 He/she can judge about how much time has passed without a watch

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.173	4.060	4.933	LD/LA: Yes
SD	1.580	1.506	1.456	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	75	67	179	
	F = 11.8018			

$p < .0001$

TABLE 72

Frequency of satisfactorily completing tasks by deadlines among junior and senior high school LD, LA and NA youth

Parent Question: 37.23 When given a task to complete and a deadline, he/she does the work correctly and on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.728	3.486	5.481	LD/LA: Yes
SD	1.410	1.335	1.235	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	162	142	183	
	F = 114.5868			

$p < .0001$

TABLE 73

Frequency of satisfactorily completing tasks by deadlines among senior high school LD, LA and NA youth

Parent Question: 37.23 When given a task to complete and a deadline, he/she does the work correctly and on time

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.646	3.672	5. 481	LD/LA: Yes
SD	1.350	1.418	1.235	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	79	67	183	
	F = 79.6546			

$p < .0001$

TABLE 74

Frequency of preparedness for tasks/events among junior and senior high school LD, LA and NA youth

Parent Question: 37.24 He/she anticipates events and gets ready for them

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.459	4.309	5.361	LD/LA: Yes
SD	1.660	1.698	1.301	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	159	139	183	
	F = 22.7500			

$P < .0001$

TABLE 75

Frequency of preparedness for tasks/events among senior high school LD, LA and NA youth

Parent Question: 37.24 He/she anticipates events and gets ready for them

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.434	4.254	5.361	LD/LA: Yes
SD	1.715	1.673	1.301	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	76	67	183	
	F = 18.8329			

$p < .0001$

TABLE 76

Frequency of memory lapse among junior and senior high school LD, LA and NA youth

Parent Question: 37.25 He/she forgets easily

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.390	3.514	2.674	LD/LA: Yes
SD	1.336	1.529	1.052	LD/NA: No
RANGE	1-7	1-7	1-6	LA/NA: NO
n	159	142	184	
	F = 20.6344			

$p < .0001$

TABLE 77

Frequency of memory lapse among senior high school LD, LA and NA youth

Pearent Question: 37.25 He/she forgets easily

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.195	3.324	2.674	LD/LA: Yes
SD	1.203	1.408	1.052	LD/NA: No
RANGE	1-7	1-7	1-6	LA/NA: No
n	77	68	194	
	F = 10.2460			

$P < .0001$

TABLE 78

Frequency of coordination feats among junior and senior high school LD, LA and NA youth

Parent Question: 37.26 He/she is well coordinated

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.943	5.257	5.989	LD/LA: Yes
SD	1.686	1.655	1.024	LD/NA: No
RANGE	1-7	1-7	2-7	LA/NA: No
n	158	140	184	
	F = 23.3029			

$p < .0001$

TABLE 79

Frequency of coordination feats among senior high school LD, LA and NA youth

Parent Question: 37.26 He/she is well coordinated

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	4.816	5.265	5.989	LD/LA: Yes
SD	1.703	1.599	1.024	LD/NA: No
RANGE	2-7	1-7	2-7	LA/NA: No
n	76	68	184	
	F = 22.9182			

$p < .0001$

TABLE 80

Frequency of difficulty of expressive thought among junior and senior high school LD, LA and NA youth

Parent Question: 37.28 He/she has trouble verbally expressing his/her thoughts

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	3.137	2.909	2.169	LD/LA:	Yes
SD	1.660	1.496	1.032	LD/NA:	No
RANGE	1-7	1-7	1-6	LA/NA:	No
n	161	143	183		
		F = 22.4708			

$p < .0001$

TABLE 81

Frequency of difficulty of expressive thought among senior high school LD,LA and NA youth

Parent Question: 37.28 He/she has trouble verbally ec-pressing his/her thoughts

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	3.077	2.603	2.169	LD/LA:	Yes
SD	1.650	1.373	1.032	LD/NA:	No
RANGE	1-7	1-7	1-6	LA/NA:	Yes
n	78	68	183		
		F = 14.3015			

$p < .0001$

TABLE 82

Frequency of misinterpreting communication of others among junior and senior high school LD, LA and NA youth

Parent Question: 37.29 He/she misinterpreted what other people say

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap
$\overline{X}$	3.069	3.035	2.359	LD/LA: Yes
SD	1.351	1.339	0.965	LD/NA: No
RANGE	1-7	1-7	1-7	LA/NA: No
n	159	141	184	
		F = 18.6858		

$p < .0001$

TABLE 83

Frequency of misinterpreting communication of others among senior high school LD, LA and NA youth

Parents Question: 37.29 He/she misinterpreted what other people say

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	2.896	2.853	2.359	LD/LA:	Yes
SD	1.242	1.330	0.965	LD/NA:	No
RANGE	1-7	1-7	1-7	LA/NA:	No
n	77	68	184		
		F = 8.7344			

$p < .001$

TABLE 84

Frequency of error repetition without resolve among junior and senior high school LD,LA and NA youth

Parent Question: 37.30 He/she has trouble learning from experience and may make the same mistake over and over

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	2.829	2.944	2.066	LD/LA:	Yes
SD	1.346	1.486	0.935	LD/NA:	No
RANGE	1-7	1-7	1-6	LA/NA:	No
n	158	142	183		
	F = 24.4696				

$p < .0001$

TABLE 85

Frequency of error repetition without resolve among senior high school LD, LA and NA youth

Parent Question: 37.30 He/she has trouble learning from experience and may make the same mistake over and over

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	2.727	2.750	2.066	LD/LA:	Yes
SD	1.314	1.510	0.935	LD/NA:	No
RANGE	1-7	1-7	1-6	LA/NA:	No
n	77	68	183		
	F = 13.4148				

$P < .0001$

TABLE 86

Frequency of social assurance among junior and senior high school LD, LA and NA youth

Parent Question: 37.32 He/she is socially assured

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	4.199	4.455	5.486	LD/LA:	Yes
SD	1.579	1.680	1.186	LD/NA:	No
RANGE	1-7	1-7	2-7	LA/NA:	No
n	151	134	181		
	F = 35.8863				

$p < .0001$

TABLE 87

Frequency of social assurance among senior high school LD, LA and NA youth

Parent Question: 37.32 He/she is socially assured

Never	Rarely	Some-times	About half the time	Often	Quite often	Always
1	2	3	4	5	6	7

	LD	LA	NA	Overlap	
$\overline{X}$	4.120	4.477	5.486	LD/LA:	Yes
SD	1.524	1.612	1.186	LD/NA:	No
RANGE	1-7	1-7	2-7	LA/NA:	No
n	75	65	181		
		F = 31.7813			

$p < .0001$

TABLE 88

LISTING OF NON-SIGNIFICANT [1] ITEMS ON REGULAR CLASS TEACHER MEASURE

ITEM NO.	ITEM IDEMTIFICATION	MEAN ACROSS GROUPS & LEVELS	STAN. DEV.
1.1	Comes to class on time	5.818	1.439
1.2	Stays in seat or work area	5.889	1.361
1.4	Talks during work periods	3.718	1.734
1.5	Paricipates in discussions	2.928	1.542
1.6	Disrupts others	2.772	1.612
1.10	Raises hand before speaking	4.392	1.933
1.11	Cleans up work	4.879	1.699
1.16	Does neat work	3.958	1.662
1.20	Ask permission to leave room	4.801	2.330
1.21	Enges in pranks	2.103	1.331
1.22	Skips class	2.056	1.484
5.0	Comparative maturity with age-mates	2.740	0.845
7.3	When criticized, cannot control emotions	1.858	1.350
7.5	When not getting own way, reacts violently	1.340	0.814
7.6	Is depressed or sad most of the time	2.503	1.069
7.7	Is moody	2.686	1.213
7.8	When having problems, works them out alone	4.027	1.458
7.9	Has a temper and exploses easily	1.981	1.226
7.10	Gets very excited easily	2.425	1.396
7.11	Doesn't stay with task more than 5-10 mins. without losing interest	3.595	1.683
7.12	Acts on impulse without thinking	3.055	1.563
7.13	Has trouble concentrating	4.160	1.648
7.14	Goes along with group values rather than own	4.059	1.532
7.15	When taken advantage of, makes opinion known	3.596	1.453
7.16	When given a choice, makes decisions easily	3.662	1.400
7.17	Takes care of belongings	4.661	1.613
7.18	Given several things to do in a short time, can usually figure a way to get them done	3.052	1.485
7.19	When criticized, gets depressed	2.816	1.289
7.20	Can complete 3-4 instructions in correct order	3.596	1.598
7.23	Anticipates events and gets ready for them	2.988	1.490
7.24	Forgets easily	4.020	1.482
7.25	Is well-coordinated	4.822	1.431
7.26	Has trouble verbally expressing thoughts	3.571	1.545
7.27	Misinterpretes what others say	3.054	1.187
7.29	Trouble expressing ideas in writing	4.459	1.574
7.30	Misinterpretes non-verbal signals	2.829	1.187
7.31	Is socially assured	3.690	1.490
8.1	Has diffuculty remembering names & concepts	1.401	0.491

(con't)

TABLE 88 (con't)

ITEM NO.	ITEM IDENTIFICATION	MEANS ACROSS GROUPS & LEVELS	STAN. DEV.
8.2	Inability to recognize errors in work	1.711	0.454
8.3	Does not organize information for recall	1.733	0.443
8.4	Unable to define abstract concepts	1.699	0.459
8.5	Difficulty in comparing and contrasting concepts	1.691	0.463
8.6	Difficulty in using word attack skills	1.497	0.501
8.7	Difficulty in recognizing primary level words	1.348	0.477
8.10	Difficulty in determining content or operation needed when solving mathematical problems	1.688	0.465
8.12	Difficulty adjusting to altered schedule	1.389	0.488
8.13	Demonstrates low self-confidence	1.499	0.501
8.14	Poor concentration, distractable or distracts others	1.623	0.485
8.15	Difficulty doing tasks independent of others	1.595	0.492
8.16	Is concerned about being retarded or "dumb"	1.204	0.403
8.17	Has little insight into inappropriateness of own behavior	1.255	0.437

[1] $p > .01$

TABLE 89

LISTING OF NON-SIGNIFICANT [1] ITEMS ON PARENT MEASURE

ITEM NO.	ITEM IDENTIFICATION	MEAN ACROSS GROUPS & LEVELS	STAN. DEV.
37.7	He/she is moody (sometimes up,sometimes down, with on apparent reason	2.284	1.020
37.10	He/she gets very excited easily	3.023	1.361
37.15	When taken advantage of , he/she stands up for his/her rights	5.023	1.595
37.27	He/she has trouble sleeping	1.977	1.083
37.31	He/she misinterpretes non-verbal signals such as facial expressions and gestures	2.328	1.059

[1] $p \leq .01$