

RUNNING HEAD: Factors Influencing Teachers' Decisions

Factors influencing teachers' decisions to refer students for special education evaluation

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Abstract

The criteria regular education teachers use to determine which students to refer for evaluation not only vary, but are also unclear. In the best interest of children, it is important to understand what leads to a teacher referral of certain students and not others. Thus the primary objective of this study was to identify the factors that influence teachers' decisions to refer students for special education evaluation. Such information may be helpful in reforming the special education referral process. Results of this study suggest that there is a significant difference in referral for special education consideration based on teacher's "Gender", type of "Teacher certification", "Geographical location of the school", and "Teacher competency".

Factors influencing teachers' decisions to refer students for special education evaluation

Learning Disability (LD) has become the largest special education category (Mercer, Jordan, Allsopp, & Mercer, 1996; Clarizio & Phillips, 1986) since it was included in the Individuals with Disabilities Act (IDEA, PL 94-142) which was originally signed into legislation in 1975. From the beginning, the definition of LD has been, and continues to be vague at best, consisting less of what LD is and more of what LD is not (Mercer, et al., 1996). Further, the diagnostic criteria for LD include several exclusionary factors that appear to be easily overlooked in the interest of facilitating student achievement. Several studies have shown that the LD category is often used as a special education classification for students who simply are not succeeding in the regular education classroom (Merrell & Shinn, 1990; Algozzine & Ysseldyke, 1983; Ysseldyke, Algozzine, Shinn, & McGue, 1982; Gresham, MacMillan, & Bocian, 1996; Mercer, et al., 1996; MacMillan, Gresham, & Bocian, 1998).

Given these inherent problems and the steady increase of the special education population, it is not (definitely) clear what factors are used when determining which student should be considered for special education evaluation. According to Algozzine, Christenson, and Ysseldyke (1982), the single most important factor in the eligibility determination for special education services is the referral. They found that 73% of students referred for an evaluation qualified for services. This study was later replicated by Ysseldyke, Vanderwood, and Shriner (1997), who found that 74% of evaluated students receive some type of services. Therefore, it is important to understand the factors teachers use to decide whether or not to refer a student for psycho-educational testing (Gresham, Macmillan, & Bocian, 1997). Thus, the primary purpose of this study was to identify the factors that influence teachers' decisions to refer students for special education evaluation

Throughout the school year, teachers' daily interactions with students and the opportunity to observe them and their academic progress, or lack thereof, results in an awareness of students who are failing to achieve academically. Therefore, they appear to have a rather concrete basis for determining which students may benefit from services

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(Soodak & Podell, 1993; Gerber & Semmel, 1984). If a teacher judges a student to be achieving below average, the likelihood of that student being referred increases. Further, Gresham, et al. (1997) found that teachers had a 95% accuracy rate in distinguishing students with LD, Low Achievers (LA), and students with low intelligence quotient (IQ) from a control group consisting of students who had never been referred for special education consideration. However, the teachers could not differentiate between the LD, LA, and low IQ students. Clarizio (1992) found teachers to be unreliable discriminators of LD from non-LD students, as only 54% of referred students were identified as LD. Therefore, it appears teachers are good judges of academic performance, but they are unable to make the distinction between LD and low achieving students. Nonetheless, due to the subjective nature of the referral and diagnosis as well as the vagueness of the definition of LD, it is not surprising that teachers have difficulty in making this distinction.

How do teachers decide which students to refer? Clearly, not every poorly performing student is referred for an evaluation. As the following studies show, it appears there are various factors that affect a teacher's decision to refer a student for psycho-educational evaluation; however, these factors may or may not be relevant to special education placement. Christenson, Ysseldyke, and Algozzine (1982) conducted a study examining institutional factors influencing a teacher's decision to refer. They found factors, such as the teacher's belief system, knowledge of individual differences, class size, length of time between referral and the evaluation, perceptions of confidence in the professional receiving the referral, confusion regarding state and federal guidelines, threat of litigation, availability of services, the district's rules about service delivery, and inadequate in-service training regarding behaviors indicative of the need for referral as influences on the referral decision.

Soodak and Podell (1993) found that teachers with high efficacy beliefs, or the belief that their teaching will influence students, were less likely to refer students for special education placement. Similarly, Ashton and Webb (1986) concluded that teachers who believe in their own ability to teach LD students are more likely to include these students in their classrooms.

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Overall, poor academic achievement and misbehavior appear to be the primary reasons for referral (Gottlieb & Weinberg, 1999; Gresham, et al., 1996; Soodak & Podell, 1993; Shepard, et al., 1983). For instance, MacMillan, Gresham, Lopez, and Bocian (1996) concluded that a mix of low academic achievement with disruptive, externalizing behaviors in a student results in a higher likelihood of pre-referral intervention, with students who fail to benefit from these interventions being referred for evaluation.

Other non-academic factors that might influence referral seem to be height, weight, and age (Andrews, Wisniewski, and Mulick, 1997). Taller children and heavier children were referred at a higher rate than average-sized children. A study conducted by Phipps (1982) found gender differences in the number of referrals made. She concluded that boys are referred more often than girls due to behavior concerns, since boys are generally more likely to present conduct problems in their classroom than girls. Clarizio (1992) also indicated the referral rate to be 2:1, boys to girls.

The criteria regular education teachers use to determine which students to refer for evaluation not only vary, but they are also unclear. Gresham, et al. (1997) underscore the importance of understanding what leads to a teacher referral of certain students and not others. Thus, the current study attempted to identify the factors that influence teachers' decisions to refer a student for a psycho-educational evaluation. The study also examined teachers' view of the etiology of LD, the effectiveness of services or programs for special education students, their educational preparation and self-efficacy in teaching LD students, the rate of referral, the goal of referral, the pre-referral process and its usefulness, and their view of the effectiveness of special education support professionals, e.g., school psychologists.

Based on the literature, it was predicted that low achievement and behavioral problems would be primary reasons for referring a student for evaluation (Gottlieb & Weinberg, 1999; Gresham, et al., 1996; Soodak & Podell, 1993; Shepard, et al., 1983). Further, it was predicted that there would be a relationship among a teacher's perception of the etiology of learning disabilities (Christenson, Ysseldyke, and Algozzine, 1982), level of

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self-efficacy for teaching learning disabled students, belief about who would benefit from special education services (Soodak and Podell,1993), and rate of referral.

Participants

Fifty six percent (56%, n=80) of potential participants,144 teachers, in K to 12 grades in a Midwestern city and neighboring rural schools completed the survey. All participants were selected by the respective school principals for the purpose of supervising student teachers and other practicum students during the time the survey was conducted, one academic year. In other words, participants were experienced teachers to complete the survey. Participants were not paid, nor were they promised benefits other than their willingness to contribute to knowledge. Participation was voluntary as the teachers had the choice to not return the survey if they desired to do so. For this reason, there was no follow-up, nor was there a mechanism to track the instrument as a guarantee for anonymity.

Instrument

The survey instrument, a 60-item questionnaire on a Likert Scale, was designed by Perry and HaileMariam (2001) and field tested for unpublished masters' thesis project. The questions were based on the literature that reported factors which had some bearing on referrals. Slight modifications were made to fit the needs of the current study.

Procedure

All participants received a letter explaining the procedures including anonymity and confidentiality and inviting them to participate in the survey. One hundred and forty four (144) questionnaires were delivered by student teachers to their respective supervisors (potential participating teachers) along with self-addressed and stamped envelopes for returning the completed questionnaires, if the teacher wished to participate. The instrument

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was self-administered, and therefore, reliance on teachers to follow directions and complete the survey independently as described in the letter attached to the questionnaire.

Results

A series of statistical analyses, such as... descriptive, frequency, mean comparison (ANOVA) and regression were conducted using both SAS and SPSS programs to answer the following questions:

I. Is there any relationship between teachers' belief of what learning disability is and (1) the factors that influence referral, (2) the type of service they prefer for learning disabled students, (3) their feeling competent to educate special education students in the regular education classroom, and (4) the number of students teachers refer for special education consideration?

Results of this study suggest that teachers' beliefs of what learning disability is certainly influenced by several factors. Five variables dealing with teacher beliefs showed relationships with those variables that influenced teacher decision-making.

I-1) Regarding the belief that learning disability may be the result of "Inadequate Instruction", 79% of participants disagreed while 21% agreed. For participants who disagreed that "Inadequate instruction" could explain L.D., the predictor variables for influencing their decision-making to refer were: "Behavior problem"; "Class size; "Ethnicity of student"; "English proficiency"; "Grade of student; "Lack of motivation; and "Availability of services". Data are presented in Table 1. No other significant differences were detected.

Teachers also suggest that their belief of L.D. having to do with inadequate instruction is directly related to their professional competency in their chosen field of teaching. As Table 1 shows the variables that affected their decision-making were: Regular education teachers not having the time to deal with L.D. students in their regular classroom; Regular education teachers do not have the expertise to teach L.D. students; Teachers' reliance on school psychologist to do interventions for behavioral difficulties; and Teachers' ability to always incorporate IEP goals into the classroom activities.

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I-2) Regarding the belief that learning disability may be explained by “Developmental Factors”, 89% and 11% of participants agreed and disagreed, respectively. For the high majority who reported that “Developmental Factors” may explain L.D., 13 other factors influenced their decision to refer students for evaluation for special education consideration. These variables range from “Low achievement” to “Poor attendance; and “Availability of services. Table 1 presents these data. No other significant differences were detected.

I-3) Regarding the belief that learning disability may be explained by “Environmental factors”, 78% of participants agreed and 22% disagreed with the statement. For those who believe that “Environmental factors” may explain L.D., the following variables showed significance in influencing teachers' decision: “Socio-economic support”; “Family problem”; “Student's size”; “Physical appearance; “Poor attendance; and “Availability of services (Table 1). No other significant differences were detected.

I-4) regarding the belief that learning disability may be explained by “Lack of family support”, participants were evenly divided, 50% agreed while the other 50% disagreed. For the 50% who agreed that “Family support” has something to do with L.D., the following four variables influenced their decision. “Family problem”; “Emotional stability”; “Gender of student”; and “Poor attendance”. No other significant differences were detected (Table 1).

I-5) Regarding the belief that learning disability may be due to “Socio-economic status”, 29 % agreed and 71% disagreed. This showed significant difference with four other variables as factors influencing teachers' decision on type of services they prefer for a particular learner. The variables were “Family problems”; “Emotional stability; “Physical appearance”; and “Grade of student”. No other significant differences were detected. (See Table 1)

II. Questions under category two deal with if number of years of experience may have influence on number of students that teachers refer and their competency level to teach special education students in the regular classroom.

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The overwhelming majority of teachers (72%) agreed and 28% disagreed that they relay on "School psychologist's intervention". The model showed significant difference between the variable "Years of experience of teachers" [$F=2.421$ (1) $p=.03$] with the variable "School psychologist's intervention" [$F=5.71$ (1) $p=.02$]. No other significant differences were detected.

Was there any relationship between teachers' belief of what learning disability is and the type of service they prefer for learning disabled students? The only significant indicator in relation to preferred service is "Socio-economic Status" of the family. Although 71% of the teachers disagreed and 29% agreed on the belief that learning disability is influenced by "Socio-economic status", although few, the model showed five predictor variables. The variables were: "The need for special education services"; "Mild L.D. mainstreaming"; "Mainstreaming helps foster"; the variable "I Feel free to disagree on service decisions"; and the variable "My input is valued". No other significant differences were detected. (Table 2)

When it came to availability of services and which student qualified for these services, teachers suggested that socio-economic status of the family is directly related to five specific variables: all students with L.D. need special education support; students with mild L.D. should be mainstreamed; mainstreaming helps foster understanding of individuals with L.D. Teachers also suggested that they feel free to disagree with services/program decisions by IEP committee; and feel that at the IEP meeting their input is valued.

Was there any relationship between teachers' belief of what learning disability is and their feeling competent to educate special education students in the regular education classroom?

For this group of teachers, the feeling of competence to educate learning disabled students is indicated by the model "Inadequate instruction" showing strong relationship to three other variables. The analysis showed that although 79% of participants disagreed and

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21% agreed that “Inadequate instructional” contributes to learning disability of learners, they suggest that their referrals are determined by the factors that are associated with “Inadequate instruction.” One such variable is “Lack of time to deal with special education student; another variable “School psychologist’s intervention”; and the third variable is “Incorporate student IEP”. No other significant differences were detected. (Table 2)

The secondary issue that questions teachers’ credibility in regards to their feeling competent in dealing with learning disabled students is their belief that if there is “Discrepancy between ability and achievement, there is learning disability”. With “Discrepancy between ability and achievement” as a model, analysis of variance showed significant difference with three other variables: “Collective efforts” [F=3.84 (1) p=.03]; “School psychologist” [F=16.64 (1) p=.001]; and “Legally I am obligated” [F=3.21 (1) p=.077]. No other significant differences were detected.

Was there any relationship between teachers’ belief of what learning disability is and the number of students teachers refer for special education consideration? No! None of the models showed significant difference.

Table 3. Relationship between Teachers’ Belief of What Learning Disability is and the type of Service they prefer for LD students and teacher competency to teach LD Students in the Regular Education Classroom.

III. Category three addresses question related to influence of gender, age, certification and level of education on other variables that influenced teacher decision to refer.

Teachers’ belief that L.D is “Brain Dysfunction” the overwhelming majority, 91% of teachers agree and 19% disagree with the statement. The model showed significant difference with the independent variable “Teaching Certificate”, F=4.09 (1) p=.07. No other significant differences were detected. Teachers’ opinion of brain dysfunction as related to L.D., although no connection to their education level, is directly related to the type of teaching certificate they hold.

In addition, mean comparison for the same variable showed greater mean for secondary certification (m=2.142; n= 35; s.d.=.73) than elementary certification

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($m=1.66$; $n=35$; $s.d.=.73$). Teachers' belief that L.D. is "Genetics (inherited)", 69% of the teachers agree and 31% disagree. The model showed significant difference with the independent variable "Gender of Teacher", $F=4.9$ (1) $p=.03$. No other significant differences were detected.

In addition, teachers' opinion of L.D. being genetic (inherited), although there was no connection to their education level, they suggested it is directly related to the gender of the teachers. Test of means also indicated greater mean for female teachers ($m=2.846$; $n=52$; $s.d.=.57$) than male ($m=1.642$; $n=28$; $s.d.=.62$) suggesting that the perception of female teachers is stronger in referring students based on this variable. At the same time, the degree teachers hold also had significant contribution to their perception to refer the students or not. In this case, the mean for specialist degree was greater than masters and bachelors degree respectively, Spec. degree ($m=2.333$; $n=3$; $s.d.=1.1$), masters degree ($m=2.062$; $n=48$; $s.d.=.78$) and bachelors ($m=1.551$; $n=29$; $s.d.=.68$).

In examining the category of teacher competence as it relates to referrals, three variables are considered—V57, V60 and V61. In this analysis, V57, Regular education teacher does not have the expertise to teach learning disabled student (as one of the variables dealing with the category of teacher competency). In this case, teachers suggest that the gender of the teacher and the grade level taught have influence in the perception of teacher to consider this variable as criteria to refer students for especial services. Test of means indicates greater mean for male teachers ($m=2.607$; $n=28$; $s.d.=.68$) than female teachers ($m=2.250$; $n=52$; $s.d.=.79$). In terms of grade level taught, secondary teachers show greater mean ($m=2.512$; $n=39$; $s.d.=.68$) than elementary teachers ($m=2.333$; $n=36$; $s.d.=.77$), all grade ($m=2.000$; $n=1$; $s.d.=...$) and special ed. ($m=1.500$; $n=4$; $s.d.=.57$). For V60, school psychologist is knowledgeable about interventions for learning difficulties, test of mean indicates greater mean for female teachers ($m=2.769$; $n=52$; $s.d.=.64$) than male teachers ($m=2.42$; $n=28$; $s.d.=.75$). For V61, School psychologist is knowledgeable about interventions for behavioral difficulties, test of means showed greater mean for female teachers ($m=2.826$; $n=52$; $s.d.=.58$) than male teachers ($m=2.428$; $n=28$; $s.d.=.83$).

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Another category where gender of teacher and type of degree the teachers hold made a difference was when the grade of the student was considered significant in their decision. In this case, test means indicated that female teachers had greater mean ($m=2.812$; $n=52$; $s.d.=.57$) than male teachers ($m=1.340$; $n=28$; $s.d.=.62$). The type of degree teachers held also showed significant difference in the test of means for the same variable. Those with specialist degree had greater mean ($m=2.666$; $n=3$; $s.d.=.57$) than masters ($m=2.187$; $n=48$; $s.d.=.76$) and those with bachelors degree ($m=1.620$; $n=29$; $s.d.=.67$). One other area of concern for teachers in the past was the lack of motivation in students. Although this variable did not show up in any of the previous analysis, test of means indicated a strong relationship with the type of degree teachers hold. In this case, teachers with masters degree showed greater mean ($m=2.562$; $n=48$; $s.d.=.68$) than specialist degree ($m=2.336$; $n=3$; $s.d.=.57$) and bachelors degree ($m=2.034$; $n=29$; $s.d.=.62$) suggesting teachers' perception of whether the student is motivated or not has influenced their decision to refer that student for services.

Along with motivation, teachers indicate that students' lack of connectedness in classroom activities was a significant variable to consider in making referrals. In this case, as in the previous two, the gender of teachers and type of degree they held were factors. Test of means show greater mean for female teachers ($m=3.230$; $n=52$; $s.d.=.61$) than male teachers ($m=2.535$; $n=28$; $s.d.=.63$). The same analysis indicates greater mean for (type of degree) specialist degree ($m=2.662$; $n=3$; $s.d.=.57$) than masters ($m=2.572$; $n=48$; $s.d.=.68$) and bachelors ($m=2.024$; $n=29$; $s.d.=.62$) for the same dependent variable.

Discussion

The primary purpose of this study was to identify the factors teachers consider when referring a student for a psychological evaluation, a gate way to special education placement. Results were consistent with the current literature, which suggests that the referral process is subjective. Results of the current study not only identified the criteria the majority of teachers use for referring students for special education placement consideration, the study

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also identified how teachers' perception of the cause of learning disabilities influences the criteria they use to refer a student. For instance, over 75% of teachers who disagreed that "inadequate instruction" could explain learning disability considered two factors, environmental (class size or availability of services) and student factors (behavior problems or ethnicity of the child) when referring students for evaluation. On the other hand, the remaining 21% of teachers who agreed that "inadequate instruction" could explain learning disability reported that teachers' professional competency (regular education teachers not having the time to deal with or have the expertise to teach L.D. students in the regular classroom or teachers' reliance on school psychologists to do interventions for behavioral difficulties) to be the influencing factor for referring students for evaluation. In this sample, it is clear that teachers use multiple subjective criteria to refer students for special education evaluation.

There is evidence that suggests collaboration and consultation between teachers and school psychologists to help the at-risk students in the regular education classrooms more effective than referral. However, consultation and collaboration for services are not yet common practices.

Thus these factors influenced teachers' decision-making to refer students to special education services. These are then predictor variables to the perception that L.D is influenced by developmental factors, and therefore, referral might be necessary. Developmental factors refer to a child's experiences that contribute to his or her growth and development as a learner. It is important to note that the predictor variables as defined by the model may not have been clear to participants in order to be able to differentiate between environmental and developmental factors. Thus, caution must be exercised in generalizing this result. (See Table 3)

Although there might be differing opinions in determining whether a factor is environmental or developmental, the participants in this study have identified few variables impacting their belief that L.D. is related to environmental factor. These are then predictor variables to the generalization that L.D. is in part influenced by environmental factors.

These are then predictor variables for teachers' perception that L.D. is in part explained by lack of family support. Previous research results support the findings of this study that gender of the student is a predictor variable for special education referral. More boys than girls are referred to special education services.

Although these factors are significant and predictor variables, teachers suggested that they do not believe L.D. is directly connected with the student's socio-economic status. In this case teachers are aware that socio economic status of the family is irrelevant in their belief that the two are directly related, however their decision to make referral is affected by the predictor variables.. Thus these factors influenced teachers' decision to refer students for special education services. These are then predictor variables to the conclusion reached by teachers that L.D. is not influenced by economic status of the family but affected their decision to refer.

II. Questions under category two deal with if number of years of experience may have influence on number of students that teachers refer and their competency level to teach special education students in the regular classroom.

The overwhelming majority of teachers (72%) agreed and 28% disagreed that they relay on "School psychologist's intervention". The model showed significant difference between the variable "Years of experience of teachers" with the variable "School psychologist's intervention. No other significant differences were detected.

With maturity and years of experience of handling challenges in the classroom, these groups of teachers perhaps are questioning the timing of the intervention. Some might believe that teachers must perform the intervention in the classroom prior to referring the student to the psychologist for assistance. Teachers are suggesting that experience is important in dealing with at-risk students in general, and the reliance on school psychologist is also significant in making referrals. Teachers are also distinguishing the difference between learning difficulties and behavior difficulties. As such, they are keenly aware that school psychologist's involvement in the intervention will resolve initial problems that would remove the student from the classroom.

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Therefore, teachers believe that their decision is influenced by how they feel about availability of services. All indications are, at least for this group of teachers, their commitment to mainstreaming, the IEP process, and their willingness to disagree on certain recommendations by the committee are critical on their referral for special services.

Was there any relationship between teachers' belief of what learning disability is and their feeling competent to educate special education students in the regular education classroom?

For this group of teachers, the feeling of competence to educate learning disabled students is indicated by the model "Inadequate instruction" showing strong relationship to three other variables. The analysis showed that although 79% of participants disagreed and 21% agreed that "Inadequate instructional" contributes to learning disability of learners, they suggest that their referrals are determined by the factors that are associated with "Inadequate instruction." One such variable is "Lack of time to deal with special education student; another variable "School psychologist's intervention"; and the third variable is "Incorporate student IEP". No other significant differences were detected.

Again, for this group of teachers, the bigger issues that define their competence and question their credibility among colleagues, related to "Inadequate instruction", therefore use it as criteria to refer students for special services are the "Lack of time" to deal with the same group of at-risk students; "Incorporating student IEP"; and receiving "Interventions from the school psychologist".

Teachers appear to agree on their suggestion that these variables are important in defining their professional competency, therefore, influenced their decision to refer. Teachers' reliance on collaborative efforts of other professionals to help in a regular classroom; reliance on school psychologist on intervention for behavioral difficulties; and teachers' understanding of their obligations to incorporate student's IEPs in classroom activities are critical for teachers who deal with at-risk students who need referral. Thus although few, these are predictor variables which influenced teachers' decision for referral as suggested by the model dealing with "Discrepancy between ability and achievement".

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Was there any relationship between teachers' belief of what learning disability is and the number of students teachers refer for special education consideration? No! None of the models showed significant difference.

Teachers' opinion of brain dysfunction as related to L.D., although no connection to their education level, is directly related to the type of teaching certificate they hold. Although we caution that the number of participants is uneven, in some cases too small, the results suggest that the higher the degree teachers have the greater the possibility that the variable in question will have influenced their perception to refer for special serves.

One other variable worth considering is availability of services. Although this variable was considered as predictor variable in three other occasions, teachers' decision to refer students whether based on their judgment of availability of services depended on teachers grade level taught, type of degree they held, and the type of teaching certificate they held. The three independent variables are clear indicators of whether teachers refer students for special services or not.

One other variable worth noting was teachers' years of experience in the classroom having influence how they see school psychologist's role as intervention for behavior difficulties. It was anticipated that teachers will use intervention prior to referring students to the psychologist for evaluation.

There are a few limitations to this study. First, it is important to remember that self-report can be subjective. Secondly, cooperating teachers may not be true representation of all teachers, as they are experienced teachers who qualified to supervise pre-service student teaching. Finally, the survey instrument is not standardized. Despite these limitations, the study appears to have significant **implications**. There appears to be a clear need for consistent and uniform referral criteria, effective pre-referral intervention system, appropriate services, and collaborations among professionals to better serve at-risk students.

Future studies may want to replicate this study with diverse population in terms of ethnicity and years of experience. Results of such enquiries may assist in the development of common criteria for teachers to follow when referring students for evaluation.

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Table 1
Teachers' Perceptions of the Causes of Learning Disabilities

MODEL	RSQR	F value	DF	SIG.
INADIQUATE INSTRUCTION	0.444639	2.36	20	0.005
Behavior problem		3.42	1	0.07
Current class size		8.85	1	0.004
Ethnicity of student		8.87	1	0.004
English proficiency		5.61	1	0.02
Grade of student		4.71	1	0.03
Lack of motivation		4.22	1	0.04
Availability of services		3.62	1	0.06
MODEL	RSQR	F value	DF	SIG.
INADIQUATE INSTRUCTION	0.178065	2.23	7	0.041
Regular education teacher		3.57	1	0.062
Lack of time to deal with		10.3	1	0.002
School psychologist		2.66	1	0.1
Incorporate student IEP		5.41	1	0.022

MODEL	RSQR	F value	DF	SIG.
DEVELOPMENTAL FACTORS	0.67716	6.19	20	0.0001
Low achievement		17.26	1	0.001
Behavior problem		15.83	1	0.002
Socio-economic support		18.15	1	0.001
Gender of student		9.8	1	0.002
Family problem		31.05	1	0.001
Student's size		10.37	1	0.002
Student's teach-ability		3.46	1	0.06
Ethnicity of student		4.91	1	0.03
English proficiency		10.39	1	0.002
Age of student		5.43	1	0.02
Grade of student		9.5	1	0.003
Poor attendance		8.36	1	0.005
Availability of services		16.29	1	0.002

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Table 1 Continue...

MODEL	RSQR	F value	DF	SIG.
LACK OF FAMILY SUPPORT	0.479789	2.72	20	0.001
Family problems		12.3	1	0.001
Emotional stability		8.97	1	0.001
Gender of student		6.88	1	0.01
Poor attendance		5.45	1	0.02

MODEL	RSQR	F value	DF	SIG.
ENVIRONMENTAL FACTORS	0.457788	2.49	20	0.003
Socio-economic support		8.61	1	0.004
Family problems		7.66	1	0.007
Student's size		4.16	1	0.046
Physical appearance		2.89	1	0.09
Poor attendance		5.63	1	0.02
Availability of services		11.29	1	0.001

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Table 2.

Relationship between Teachers' Belief of What Learning Disability is and the type of Service they prefer for LD students and teacher competency to teach LD Students in the Regular Education Classroom.

MODEL	RSQR	F value	DF	SIG.
ECONOMIC STATUS	0.2217	2.52	8	0.01
Need special education		3.5	1	0.06
Mild L.D. mainstream		3.1	1	0.08
Mainstreaming helps foster		4.44	1	0.03
Disagree service decision		4.99	1	0.02
My input valued		2.73	1	0.1

MODEL	RSQR	F value	DF	SIG.
INADIQUATE INSTRUCTION	0.178065	2.23	7	0.041
School psychologist		2.66	1	0.1
Incorporate student IEP		5.41	1	0.022

MODEL	RSQR	F value	DF	SIG.
DISCREPANCY BETWEEN	0.29827	4.37	7	0.004
Collaborative efforts		3.84	1	0.053
School psychologist		16.64	1	0.001
Legally obligated		3.21	1	0.077

References

- Algozzine, B., Christenson, S., & Ysseldyke, J. (1982). Probabilities associated with the referral to placement process. *Teacher Education and Special Education, 5*, 19-23.
- Algozzine, B. & Ysseldyke, J. (1981). Special education services for normal children: Better safe than sorry? *Exceptional Children, 48*, 238-243.
- Algozzine, B. & Ysseldyke, J. (1983). Learning disabilities as a subset of school failure: The oversophistication of a concept. *Exceptional Children, 50*, 242-246.
- Andrews, T.J., Wisniewski, J.J., & Mulick, J.A. (1997). Variables Influencing Decisions to refer children for school psychological assessment services. *Psychology in the Schools, 34*, 239-244.
- Arizona Revised Statutes 15-761 (33), (2001). Retrieved August 19, 2002, available from <http://www.ade.az.gov>
- Ashton, P.T. & Webb, R.B. (1986). Making a difference: Teachers' sense of efficacy and student achievement. New York: Longman.
- Christenson, S., Ysseldyke, J., & Algozzine, B. (1982). Institutional constraints and external Pressures influencing referral decisions. *Psychology in the Schools, 19*, 341-345.
- Clarizio, H.F. (1992). Teachers as detectors of learning disability. *Psychology in the Schools, 29*, 28-35.
- Clarizio, H.F., & Phillips, S.E. (1986). Sex bias in the diagnosis of learning disabled students. *Psychology in the Schools, 23*, 44-52.
- Cruickshank, W.M. (1984). Definition: A major issue in the field of learning disabilities. *Journal of Rehabilitation, 50*(2), 7-18.
- Daane, C.J., Beirne-Smith, M, Latham, D. (2000) Administrators' and teachers' perceptions of the collaborative efforts of inclusion in the elementary grades. *Education, 121*(2), 331-339.
- Dillman, D.A. (1978). *Mail and telephone surveys : the total design method*. New York: Wiley.
- Eastern Illinois University (2002). Undergraduate Catalog. Retrieved August 9, 2002 available from <http://www.eiu.edu/~catalog/>

- Fletcher, J.M., Lyon, G.R., Barnes, M., Stuebing, K.K., Francis, D.J., Olson, R.K., et al., (2001). Classification of learning disabilities: an evidence-based evaluation. Retrieved July 24, 2002, available from <http://www.air.org/ldsummit/paper.htm>.
- Gerber, M.M. & Semmel, M.I. (1984). Teacher as imperfect test: Reconceptualizing the referral process. *Educational Psychologist, 19*, 137-148.
- Gottlieb J., Gottlieb, B.W., & Trongone, S. (1991). Parent and teacher referrals for a psycho-educational evaluation. *Journal of Special Education, 25*, 155-167.
- Gottlieb, J. & Weinberg, S. (1999). Comparison of students referred and not referred for special education. *The Elementary School Journal, 99*, 187-198.
- Gresham, F.M., MacMillan, D.L., & Bocian, K.M. (1996). Learning disabilities, low achievement, and mild mental retardation: More alike than different? *Journal Of Learning Disabilities, 29*, 570-581.
- Gresham, F.M., MacMillan, D.L., & Bocian, K.M. (1997). Teachers as “tests”: Differential validity of teacher judgements in identifying students at-risk for learning disabilities. *The School Psychology Review, I*, 47-60.
- Hoge, R.D. & Coladarci, T. (1989). Teacher-based judgements of academic achievement: A review of the literature. *Review of Educational Research, 59*, 297-313.
- Illinois State Board of Education (2001). Special Education Policies and Procedures. Retrieved August 12, 2002, from <http://www.isbe.net/spec-ed/PDF/Policies&Procedures2001.pdf>
- Illinois State University (2002). Undergraduate Catalog. Retrieved August 9, 2002 available from <http://www.ilstu.edu/home/catalog/undergrad/>
- Individuals with Disabilities Education Act (1997). Reauthorization of the Individuals with Disabilities Education Act. Retrieved August 14, 2002, from <http://www.ideapractices.org/law/law/index.php>
- Lester, G., Kelman, M. (1997) State disparities in the diagnosis and placement of pupils with learning disabilities. *Journal of Learning Disabilities, 30*, 599-607.
- MacMillan, D.L., Gresham, F.M., & Bocian, K.M. (1998). Discrepancy between

- Definitions of learning disabilities and school practices: An empirical investigation. *Journal of Learning Disabilities, 31*, 314-332.
- MacMillan, D.L., Gresham, F.M., Lopez, M.F., & Bocian, K.M. (1996). Comparison of Students nominated for prereferral interventions by ethnicity and gender. *The Journal of Special Education, 30*, 133-151.
- Mercer, C.D., Jordan, L., Allsopp, D.H., & Mercer, A.R. (1996). Learning disabilities Definitions and criteria used by state education departments. *Learning Disability Quarterly, 10*, 217-232
- Merrell, K.W. & Shinn, M.R. (1990). Critical Variables in the learning disabilities identification process. *School Psychology Review, 19*, 74-83.
- Northern Illinois University (2002). Undergraduate Catalog. Retrieved August 9, 2002, available from <http://www.reg.niu.edu/ugcat/>
- Pennington, B.F. (1999). Toward and integrated understanding of dyslexia: Genetic, neurological, and cognitive mechanisms. *Development and Psychopathology, 11*, 629-654.
- Petersen, S.E., Fox, P.T., Snyder, A., & Raichle, M.E. (1990). Activation of extrastriate and frontal cortical areas by visual words and word-like stimuli. *Science, 249*, 1041-1044.
- Phipps, P.M. (1982). The LD learner is often a boy-Why? *Academic Therapy, 17*, 425-430.
- Rumsey, J.M., Horwitz, B., Donohue, B.C., Nace, K., Maisog, J.M., & Andreason, P. (1997). Phonological and orthographic components of word recognition: A PET-rCBF study. *Brain, 120*, 739-759.
- Shepard, L.A., Smith, M.L., & Vojir, C.P. (1983). Characteristics of pupils identified as Learning disabled. *American Educational Research Journal, 20*, 309-331.
- Shinn, M.R., Tindal, G.A., Spira, D., & Marston, D. (1987). Practice of learning disabilities as social policy. *Learning Disability Quarterly, 10*, 17-28.
- Soodak, L.C. & Podell, D.M. (1993). Teacher Efficacy and student problem as factors in special education referral. *Journal of Special Education, 27*, 66-82.

Southern Illinois University, Carbondale (2002). Retrieved August 9, 2002, available from

http://www.siu.edu/departments/oar/public_html/oareval/catalog.htm

Ysseldyke, J.E. & Algozzine, B. (1982). Bias among professionals who erroneously declare students eligible for special services. *Journal of Experimental Education, 50*, 223-228.

Ysseldyke, J.E., Algozzine, B., Shinn, M.R., & McGue, M. (1982). Similarities and differences between low achievers and students classified as learning disabled. *The Journal of Special Education, 16*, 73-85.

Ysseldyke, J.E., Christenson, S., Pianta, B., & Algozzine, B. (1983). An analysis of teachers reasons and desired outcomes for students referred for psychoeducational assessment. *Journal of Psychoeducational Assessment, 1*, 73-83.

Ysseldyke, J.E., Vanderwood, M.L., & Shriner, J. (1997). Changes over the past decade in special education referral to placement probability: an incredibly reliable practice. *Diagnostique, 23*(1), 193-201.