STATE OF WASHINGTON

DEPARTMENT OF SOCIAL AND HEALTH SERVICES

October 15, 1998

Dear Colleagues and Interested Parties:

I am pleased to send you the enclosed report of the Washington State Learning Disabilities (LD) Project. The report summarizes the results of the LD Project conducted in partnership with Elizabeth Moore, Ph.D., Nancie Payne & Associates, the Learning Disabilities Association of Washington, several Community Colleges, social services agencies, WorkFirst and Community Services staff and volunteer participants enrolled in the Temporary Assistance for Needy Families (TANF) program.

As a result of this report, we are taking a number of steps to improve the quality of services offered to TANF participants who have special learning needs. Thus far, Washington State's Welfare Reform program (WorkFirst) has been very successful. We have exceeded our initial goals in assisting families to attain self-sufficiency. However, we are aware many families have special needs requiring additional services. We will endeavor to improve upon the effectiveness and efficiency in the delivery of these services.

If you have questions, concerns, comments or would like additional comments of the LD report, please contact:

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Yours Truly,

MICHAEL W. MASTEN, Director
WorkFirst Division

Enclosure

LEARNING DISABILITIES

A Report by the State of Washington
Department of Social and Health Services
Economic Services Administration
WorkFirst Division

September 29, 1998

EXECUTIVE SUMMARY

WASHINGTON STATE LEARNING DISABILITIES PROJECT

September 29, 1998

Overview:

In 1997, Washington State implemented Temporary Assistance to Needy Families (TANF) and WorkFirst. Families have a life time limit of five years for the receipt of TANF. WorkFirst emphasizes employment as the first option to achieving economic self-sufficiency. Some TANF families experience barriers to employment and self-sufficiency as a result of family violence, medically fragile children, alcohol/substance abuse, physical and mental disabilities. Learning Disabilities (LDs) among the adult population may also impede successful employment. Many families with special needs obtain employment without any special assistance while others may require intervention in order to obtain and retain employment. These families have often been referred to as the "hard to serve".

According to estimates derived from the latest research conducted through the National Institutes of Health on related disabilities, 15 to 20% of the U.S. population have some form of LD. Most people who experience LDs often have a higher than average IQ. Research also indicates that most adults adapt to these disabilities enabling them to lead productive and meaningful lives.

Purpose:

Identifying barriers to employment and job retention enables the Department of Social and Health Services (DSHS) to provide the appropriate interventions. In 1994, Washington State began a pilot project to develop a brief screening tool to assist DSHS Case Managers and Social Workers in identifying participants whose LD might impede successful employment and attainment of self-sufficiency. In partnership with Job Service Specialists, some Private Industry Councils, Community College educators, and other social service agencies could provide meaningful interventions for participants of the former Aid to Families with Dependent Children (AFDC) and current TANF programs.

Project Goals:

- Provide instructional accommodations and medical interventions;
- Develop a brief screening tool to be used to identify TANF recipients who may need further assessment; and
- Increase WorkFirst Case Managers' and Social Workers' knowledge of the specific needs of persons with LD.

Findings:

The Brief Screen for LD correction classified 74% of the participants as LD or non-LD, positively identifying 70% of the participants with LD and correctly ruling out 79% of those without an identified special learning need. Compared to those who were not identified by the screen, participants without a special learning need who were positively identified by the screen tended to have lower IQ scores and were more likely to report problems with long term substance abuse, multiple sinus problems, and prolong high fever.

The LD Project was timely in that it coincided with welfare reform. Families with special needs have the greatest barriers to overcome, and potentially require the greatest amount of time to resolve their issues. Early intervention assists these families to move off of welfare and to become self-sufficient. The **Learning Needs Screening Tool** will be helpful in identifying possible learning needs or deficits that potentially impact the participant's ability to obtain and maintain employment failing job search or participants demonstrating an inability to remain employed, are likely candidates for LD screening. This information will help participants find occupations that match the participant's strengths and avoid occupations that require performance in areas of weakness.

ACTION STEPS

- Make the Learning Needs Screening Tool available statewide to all WorkFirst Case Managers and Social Workers.
- Continue to train staff on the impact of LDs and employment and in how to assist participants in job search and job retention.
- Work closely with Division of Vocational Rehabilitation (DVR) to improve the referral process for those participants who could benefit from DVR services.
- Assist participant's access to appropriate short-term educational and training opportunities through local social service agencies and community colleges that will enhance the participant's ability to obtain and maintain employment.
- Assist participants access information about his or her disability and personal accommodation strategies.

INTRODUCTION

In August 1997, in response to federal and state legislation calling for welfare reform, Washington State implemented the WorkFirst program. In the year since, Washington's welfare rolls decreased by more than 18,000 recipients. The success has exceeded the Legislature's goal of a 15% caseload reduction 13 months ahead of schedule. In a survey conducted by the Department, 37% of those previously on welfare are now earning an income above the federal poverty level and 58% of the former recipients left the welfare roll because they found jobs that paid more than welfare. An additional 10% cited increased income from child support and Social Security.

There is a life time limit of five years for the receipt of Temporary Assistance to Needy Families (TANF). Those participants having the greatest difficulty achieving economic self-sufficiency often have special needs. States are identifying the various barriers to employment so that appropriate intervention can be provided. Some of the special needs these families may have include, but are not limited to:

- Parents with Learning Disabilities (LDs);
- Family violence;
- Physical and mental disabilities;
- Alcohol/substance abuse; and
- Medically fragile children.

Early identification of the special needs of families receiving temporary public assistance is critical. When given the opportunity, education, accommodation, and innovative strategies will enable the vast majority TANF participants, regardless of disability or special needs, to be successfully employed and eventually self-sufficient.

Some Facts about Learning Disabilities:

- According to estimates derived from the latest research conducted through the National Institutes of Health on related disabilities, 15 to 20 % of the U.S. population have some form of LD.
- LDs can affect anybody, regardless of age, ethnicity, economic status or gender.
- LDs often run in families.
- LDs are a lifelong condition that can be manifested in different ways during the school years and throughout the life span. Individuals with LD, however, can compensate for their difficulties with appropriate intervention, support and accommodations.

- Attention deficits and hyperactivity may, but not always, co-occur with a LD.

- LDs are not the same in all people. Each individual is unique and manifestation of LD varies tremendously.

- Early diagnosis and appropriate intervention and support are vital for the individual with LDs.

- Assist participants identified as having a LD to access information about their disability.

Background:

In November 1994, DSHS implemented a Learning Disability project designed to examine LD within the AFDC/TANF population. Two pilot sites were chosen for Phase I of the project: the Capitol Hill Community Service Office (CSO) in Seattle and the Wenatchee CSO. One hundred participants were to receive services, 50 at each site. The total number of participants actually screened for potential LD was 193. The participants were screened for potential LD using the **Payne and Associates Special Learning Needs Inventory**. All participants were then referred to a contracted clinical Educational Psychologist for testing and evaluation. These data were collected between April 1995 and May 1996.

The goals of the project were to:

- Develop and test the validity and reliability of a brief screening tool to identify participants who may need further assessment;

- Increase the DSHS Case Managers and Social Workers awareness of the specific needs of persons with LD; and

- Determine if new policies, procedures and/or strategies are necessary to promote self-sufficiency among the LD population.

In Phase II, another eight CSO sites were added across the state: Puyallup, Lake City, Kennewick/Pasco, Bellingham, Aberdeen, Burien, Spokane Southwest, and Port Townsend CSOs. These data were collected between January 1997 and May 1998. A total of 479 TANF clients in the 10-pilot sites statewide recovered:

1) The Brief Screening Tool developed in Phase I for the purpose of quickly identifying clients in need of further assessment;

2) The **Payne and Associates Special Learning Needs Inventory** was administered by the participant's Social Worker; and

3) An assessment of special learning needs by a contracted clinical Educational Psychologist.

Learning Disability (LD) Defined:

Most of the literature written about LDs concern children and educational systems. Although LD continue through adulthood, most adults adapt to these disabilities enabling them to lead productive and meaningful lives. Research also indicates that most, but not all, persons with LDs have a higher than average IQ.

Varying definitions exists and much debate occurs over the definition of LDs. Public Law 94-142, the Education for All Handicapped Children Act, defines LD as; *"A disorder in one or more of the basic psychological processes involved in understanding or using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculations."* The definition further states that LDs include perceptual impairments, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

According to PL 94-142, LD does not include problems that are primarily the result of visual, hearing, or motor handicaps, mental retardation, or environmental, cultural, or economic disadvantage. Also required, is a severe discrepancy (between one and two) Standard Deviations between the measured IQ and performance. As a result, many adults who need remedial education may be misidentified as having some form of LD.

Regardless of the definition used, most professionals would agree that the following four criteria must be included for an LD to exist:

1) A significant discrepancy between overall cognitive ability and achievement;

2) The ability to process information is impaired in some way;

3) The processing deficits must be shown to be directly contributing to underachievement; and

4) The underachievement cannot be primarily due to factors other than a processing deficit.

LD Defined – Washington State Project:

For purposes of the study, Washington State used the following definition:

A learning disability (LD) is a neurological condition that impedes a person's ability to store, process or process information. LD can affect one's ability to read, write, speak, or compute math and can impair socialization skills. Individuals with LD are generally (but not necessarily) of average or above average intelligence, but the disability creates a gap between ability and performance. This definition is measured through a discrepancy diagnostic model looking at the differences between the individual's expected performance and his or her actual performance as measured on an academic achievement test.

IDENTIFICATION CRITERIA

Several commonly accepted methods of LD identification criteria exist. Five of the most common methods compare the person's measured IQ against a performance measure. The distance or disparity between the measured IQ and performance determine if a LD exists. These methods are:

1) A discrepancy of **two standard deviations** (30 points) as used by the American Psychiatric Association and described in the **Diagnostic and Statistical Manual of Mental Disorders**, 4th edition (**DSM IV**).

The **DSM IV** states that; *"A variety of statistical approaches can be used to establish that a discrepancy is significant. Substantially below is usually defined as a discrepancy of **more than** two Standard Deviations between achievement and IQ."*

2) A discrepancy of **one standard deviation** (15 points).

3) The **Regressed Standard Score Discrepancy** method statistically adjusts the points of discrepancy necessary between IQ and performance. The level of adjustment is dependent upon the IQ. is statistically adjusted depending on the IQ. (A person with who had a measured IQ of 115 requires a discrepancy of 15 points whereas; a person with an IQ of 69 requires only a discrepancy of 7 points to be diagnosed as having a LD.)

4) A combination of **formalized testing** and **professional judgement**.

The Washington State study used three of the four methods listed described above:

1) One-Standard Deviation Discrepancy;

2) Regressed Standard Score Discrepancy; and

3) Professional Judgement.

A further analysis was done combining the **Regression** and **Professional Judgement** methods.

METHODS

In the Phase I of the project (April 1995 to May 1996), selected AFDC participants at the two sites (n=193) were screened for potential LDs using the **Payne and Associates Special Learning Needs Inventory**. All participants were then referred to a contracted clinical educational psychologist for testing and evaluation. In Phase II (June 1996 to May 1998), 479 TANF clients in 10 pilot sites statewide received:

1) Brief Screening Tool developed in Phase I for the purpose of quickly identifying clients in need of further assessment;

2) Full **Payne and Associates Special Learning Needs Inventory** administered by the participant's Social Worker; and

3) An assessment of special learning needs by a contracted clinical educational psychologist.

The educational and psychological assessment involved the administration of the **Wechsler Adult Intelligence Scale-Revised (WAIS-R)** and the Woodcock Johnson-revised Tests of **Achievement Battery-Part B** (the Achievement Battery). The purposes of the testing were to:

- Confirm or deny the presence of a LD;
- Identify the specific type of LD; and
- Recommend the type of instructional techniques that would be most beneficial to the participant.

Evaluation information was shared with the participant, DSHS Social Workers, and educational instructor and/or training provider. It was assumed that in understanding the reasons for his or her LD, the participant would be in a better position to:

- Assume responsibility for developing social skills;
- Pursue educational activities; and
- Request accommodation for special learning needs in the workplace.

Trainers used the information to design appropriate accommodations in educational or training activities to ensure that the participant, regardless of the learning needs, received quality instruction. Accommodations included, but were not limited to:

- Alternative testing methods;
- Instructional videos;
- Special instructional techniques;
- Access to library information in alternative formats; and
- Individual tutoring.

In addition to these services, all participants who were found to have a LD or whose IQ fell within the 70-79 range participated in the **Life Skills Class**, special training program developed by the Learning Disabilities Association of Washington. The purpose of the **Life Skills Class** were to address the needs of individuals in the AFDC/TANF population with special learning needs and act as a catalyst for participants re-entering into educational or job training activities.

Semi-monthly conferences were conducted to monitor progress and ensure that appropriate accommodations were being provided. Participants also received personal, academic, career and employment counseling.

Scale Creation: Phase 1

LD Diagnosis: Using scores provided by the testing and evaluation conducted by the clinical educational psychologist, three different criteria were developed to diagnose LD among the participants. First, the traditional definition of LD requires that the participant show at least one Achievement score to be significantly (15 points) below his/her ability (measured by the full scale IQ scores). The disadvantage of the first method is that it becomes more difficult to demonstrate a LD as one approaches the lower end of the IQ spectrum due to the increasingly restricted range for the qualifying achievement scores. To address this issue, Washington State's Office of Special Education in the Office of the Superintendent of Public Instruction implemented the use of a Regression Model for determining severe discrepancies between overall ability and achievement, for LD eligibility (WAC 392-172-130). This method requires smaller discrepancies as one approaches the lower end of the IQ spectrum, and greater discrepancies at the higher end of the spectrum. Finally, LDs can be diagnosed in the professional judgment of the psychologist.

The **Payne and Associates Special Learning Needs Inventory** was designed to be administered by individuals from a wide variety of backgrounds after participating in a brief training program. The purpose of this Inventory was initially to identify each client's learning strengths and weaknesses and to assist in planning appropriate accommodations for the client. In Phase I of this study, the Inventory was also used to identify clients as being low or high risk of having a diagnosable special learning need.

Analysis:

Three two-way frequency tables of the **Payne and Associates Special Learning Needs Inventory** and each of the three diagnostic criteria were constructed to identify the:

- Sensitivity (rate of correct positive identification);
- Specificity (rate of correct rule-outs);
- False Positives (rate of incorrect positive identification); and
- False Negatives (rate of incorrect rule-outs) produced by the screening tool.

Further analysis of individual items in the **Payne and Associates Special Needs Inventory** were conducted in Phase I to identify a small subset of items, which were most predictive of special learning needs. These items were collected into a pilot **Brief Screening Tool** to be used to identify individuals to be referred for further assessment or his or her LD or other developmental needs. The validity of these scales was tested in Phase II.

Scale Validation: Phase II

The data collected in Phase II were used to test the ability of the **Brief Screening Tool** and to correctly identify individuals in need of further assessment of his or her special educational or learning needs.

DESCRIPTION OF THE SAMPLE AND LD PREVALENCE

Six hundred and seventy-two (672) AFDC/TANF recipients were recruited to participate in the project from nine DSHS offices, 193 in Phase I and 479 in Phase II. The participation in each CSO is depicted in the following table.

CSO Participation

CSO	Participants
Wenatchee	24%
Aberdeen	8%
Rainier	21%
Puyallup	6%
Port Townsend	1%
Lake City	10%
Kennewick	5%
Burien	6%
Bellingham	11%

The CSOs used a variety of methods to select volunteers for the project; not all selections were random. One CSO referred pregnant or parenting teens without a high school diploma or GED. Another CSO referred people under 24 years old without a high school diploma or GED, while another CSO referred persons under 24 years old.

Of these 672 participants, 530 or 78.9% completed the initial interview and participated in the psychological evaluation. Project participants were predominantly Caucasian (67%) or African American (19%). The participants ranged in age from 16 to 58 years. The average age was 26 years and more than half (56%) of the participants were less than 25 years of age at the time they were recruited into the study.

In some aspects the project sampling differed in demographics when compared to the overall Statewide AFDC/TANF population.

The project participants were:

- Less likely to be single parents (60.8% compared to 77%);
- More likely to be African American (19% compared to 10.8%); and
- Less likely to have received AFDC/TANF for more than two years (54.7% compared to 62.3%).

About 40% had already received either a high school diploma (23%), completed their GED (14%) or attended college or other training (4%). Of the 60% without a degree, 36% report working on their GED or high school diploma. On average, these clients had completed 10.3 years of school.

Project participants had an average IQ of 88 with 27% scoring 79 or below, that is, identified as a "slow learner" or mildly mentally retarded. The study also indicated that 40% of the participants age 17-24 and 43% of the participants above the age of 25 had a previous LD diagnosis.

LD Diagnosis by the Different Methods:

Several methods were used to identify participants as having some form of LD. The different methods result in different biases in the diagnostic outcome. Listed below are the percentage of the participants diagnosed as LD by the three different methods of classification described above and summary scores indicating the number of participants identified by at least one of the methods:

Percent Classified as Learning Disabled by Method

Method	% Diagnosed
SD Discrepancy (n=533)	31.9%
Professional Judgement (n=458)	40.6%
Regression (n=533)	31.7%
At Least 1 of the 3 Methods (n=539)	49.2%

The table above demonstrates that between 32% and 49% of the study participants can be classified as LD, depending on the diagnostic method employed. Although the **SD Discrepancy** method and the **Regression** method each positively identified about 32% of the participants, only 23% were diagnosed by both methods. The **Regression** method positively diagnosed 48 individuals who were disqualified under the **SD Discrepancy** method, while the **SD Discrepancy** method positively diagnosed 49 individuals who were disqualified under the **Regression** method. The different methods are identifying different individuals.

The following table shows that depending on the diagnostic method, participants with lower IQ scores are more or less likely to be diagnosed as LD than those with higher IQ scores.

Percentage Diagnosed as LD by Method within IQ Category

	IQ 69-79	80-89	100+
Professional Judgment	49 (44.5%)	104 (40.3%)	27 (32.9%)
SD Discrepancy	31 (25.4%)	80 (27.1%)	55 (53.9%)
Regression Tables	55 (45.1%)	92 (31.2%)	25 (24.5%)
Any Method	70 (55.6%)	127 (43.1%)	60 (58.8%)

The table above also shows that 49 (44.5%) of the individuals in the 69-79 IQ range were diagnosed as LD using **Professional Judgement**, compared with 31 individuals (25.4%) using **SD Discrepancy** and 55 (45.1%) using the **Regression Tables**. Conversely, 55 (53.9%) of those in the 100 and above group were diagnosed as LD using **Achievement Discrepancy**, compared with 25 people (24.5%) using the **Regression Tables**.

Both the **Regression Tables** and the **SD Discrepancy** technique for diagnosis of LD are sensitive to the IQ of the client. At higher IQ levels, it is easier to demonstrate a 15-point discrepancy between achievement and ability. The achievement scores have a greater range to show a discrepancy, while at lower IQ levels, Achievement scores have a smaller range. For example, an individual with a Full Scale IQ of 115 (high average) could score up to 100 (average) on achievement and be considered eligible as LD. An individual with an IQ of 80 (low average), however, could score only up to 65 (very low) in achievement to be considered eligible as LD. The **Regression Tables** take this mathematical issue into consideration and reduce the required discrepancy level as IQ declines to as little as seven points for those with an IQ of 69. At the same time, these tables increase the discrepancy required as IQ increases, up to 26 points for those with an IQ of 125. Those with an IQ above 125 are not eligible to be diagnosed as LD under the **Regression Tables**. **Professional Judgment** for the diagnosis of LD is least sensitive to the IQ of the individual.

Diagnosis by Method and Ethnicity

	Caucasian	People of Color
Any Method	49%	46%
Regression	31%	35%
SD Discrepancy Method	333%	24%
Professional Judgment	42%	35%
Regression with Professional Judgement	44%	44%

Depending on the definition of "severe discrepancy" will significantly impact who is eligible to receive services, and will do so differentially by ethnicity. Remaining analyses use the diagnosis provided by the **Regression Tables** and/or by Professional Judgment to identify individuals with an IQ of at least 69 as LD. These methods are least likely to introduce a bias against those individuals most in need of accommodations for special learning needs (those at the lower ends of the IQ spectrum) or individuals of color. Using this definition, 45% of the individuals in the sample are diagnosed as LD, with no difference in prevalence by ethnic category and with a

somewhat higher prevalence of diagnosis below an IQ of 80 (55.6%) and a somewhat lower prevalence of diagnosis above an IQ of 100 (39.2%).

The table below displays the prevalence of special learning needs among the AFDC/TANF participants selected for this study.

Prevalence of Special Learning Needs Among Selected TANF Participants

None	43%
Slow Learner	10%
MMR	3%
LD	44%

The preceding table also shows that over half of the project participants were assessed as having some type of special learning need: 44% overall were diagnosed as LD, 10% as "slow learners" with IQ between 70 and 79, and 3% as mildly mentally retarded (MMR). It is interesting to note that the sample selection was largely based on those clients that the Social Workers perceived as having a LD or some other learning need. The social workers were correct in 57% of the cases.

The Table below shows the educational attainment of each of these groups.

Educational Status by Special Learning Need

Education	Diploma/GED	GED in Progress	None
MMR	14%	14%	71%
Slow Learner	22%	39%	39%
LD	36%	24%	41%
None	51%	18%	31%

More than half of those without a special learning need have completed high school or attained a GED. Among those with an identified learning need, however, the percentage obtaining a high school diploma or GED declines to about 32%. These figures indicate that the special learning needs of many of these study participants apparently have not been successfully accommodated during the participants school experience. Lack of successful accommodation may have contributed to the participant's failure to complete school.

Learning Characteristics of Sample:

The Table below summarizes the learning characteristics of the sample.

	Overall +542 N
Prevalence of LD:	239 (44%)
Average IQ	88
MMR (below 70)	19 (3.5%)
Slow Learner (70-79)	123 (23%)
80 and above	4 00 (74%)
Prevalence of LD by IQ category:	
80 and above	166 (42%)
70 to 79	67 (55%)
69	2 (67%)
Achievement (grade equivalents and (standard scores):	
Writing	6.7 (80)
Math	7.8 (85.3)
Comprehension	9.4 (86.4)
Broad Reading	9.8 (90.2)
Basic Reading	8.7 (89.4)
Learning Need:	
MMR, not LD	17 (3.1%)
Slow learner, not LD	55 (10.5%)
LD	239 (44.1%)
IQ 80+ and not LD	231 (42.6%)
Education Status by Learning Need:	
MMR	
Diploma or GED	2 (14.3%)
GED in progress	2 (14.3%)
No diploma, no GED action	10 (71.4%)
Slow Learner	
Diploma or GED	11 (21.6%)
GED in progress	20 (39.2%)
No diploma, no GED action	20 (39.2%)
LD	
Diploma or GED	76 (35.7%)
GED in progress	50 (23.5%)
No diploma, no GED action	87 (40.8%)
IQ 80+ and not LD	
Diploma or GED	111 (50.5%)
GED in progress	40 (18.2%)
No diploma, no GED action	69 (31.4%)

This Table summarizes the learning characteristics of the sample. It shows that overall, 44% of the project participants were diagnosed as LD using Washington State's **Regression Method** and **Professional Judgment**. The average IQ score in this sample is 88, with 27% of the participants scoring below 80 on their IQ evaluation. Overall, participants have academic achievement indicative of 7th, 8th, or 9th grade education.

Overall, more than half (57%) of the participants were identified as having a special learning need; (MMR (3%), Slow Learner (10%), LD (44%)). The special learning need was evidenced in educational status. Of those without an identified special learning need, about half had obtained a high school diploma or GED, compared with 32% of those with a special learning need.

***Regression Tables** allow LD diagnosis for individuals with IQ as low as 69. These individuals also fall under MMR. For the purposes of special learning need, the two individuals with an IQ of 69 who were also diagnosed with LD are classified as such. Individuals with IQ below 68, even if classified as LD by **Professional Judgment**, are classified as MMR for this study.*

Age and Special Learning Need on Educational Status:

The purpose of the next analysis was to examine the effect of special learning need on educational status for those under the age of 25 and still eligible for public education, and those aged 25 years and older. The Table below summarizes the rate of high school diploma or equivalent by special learning need and age.

Percent Completed High School Diploma or Equivalent by Learning Need and Age

Learning Need	Age 17-24		Age 25+		Overall	
LD	17	(16.8%)	59	(54.6%)	76	(36.4%)
MMR	0	(0%)	2	(25.0%)	2	(14.3%)
Slow Learner	5	(16.7%)	6	(28.6%)	11	(21.6%)
None Diagnosed	40	(29.9%)	70	(82.4%)	110	(50.2%)

Further analysis of the table above shows that more of the clients without an identified special learning need have earned either a High School diploma or a GED (50% vs. 32% overall). More of the participants in the older age group have earned either degree (62% vs. 23%). Seventy-seven percent of the participants aged 24 years and younger have not completed either a High School diploma or a GED. This figure increases to about 84% of those with a special learning need in that age range.

Educational Achievement and Special Learning Need:

The achievement portion of the psychological evaluation yielded grade equivalent scores in five areas of academic achievement: writing, math, comprehension, broad reading and basic reading. For each client, the difference was computed between the grade equivalent score achieved during the evaluation in each of the five academic areas and the number of years of education completed by that client. The resulting numbers could be negative (meaning that achievement is below what would be expected based on years of education), or positive (meaning that achievement exceeds years of education). The average achievement of the groups with special learning needs (LD, Slow Learner, MMR) was from two to six years below what would be expected based on their years of education. In contrast, the average achievement of those without an identified special learning need ranged from almost two years below expectation to two years above expectation based on years of education.

BRIEF SCREENING TOOLS

Using the data collected in Phase I, 13 items were identified which distinguished individuals diagnosed with LD from those without that diagnosis. Another eight items were identified which distinguished MMR clients from others without MMR. These items were used to create a Brief Screening Tool that could easily be administered at an initial DSHS assessment to help case managers and social workers decide whether to refer the individual for further assessment.

Screen Development for LD Assessment:

The 13 items used in the first portion of the screening tool are:

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1. *Have you had any problems learning in middle school or junior high?*
2. *Do you have difficulty working from a test booklet to an answer sheet?*
3. *Do you have difficulty or experience problems working with numbers in a column?*
4. *Do you have trouble judging distances?*
5. *Do any family members have learning problems?*

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6. *Have you had any problems learning in elementary school?*
7. *Do you have difficulty or experience problems in mixing mathematical signs? (÷/x)*

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8. *Do you have difficulty or experience problems filling out forms?*
9. *Do you experience difficulty memorizing numbers?*
10. *Do you have difficulty remembering how to spell simple words you know?*

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11. *Do you have difficulty or experience problems taking notes?*
12. *Do you have difficulty or experience problems adding and subtracting small numbers in you head?*
13. *Were you ever in a special program or given extra help in school?*

Positive responses were weighted and summed. Positive responses to the first five items were given a value of one each. Positive responses to the next two items were each given a value of two; positive responses to the next two items were each given a value of three and positive responses to the last three items were each given a value of four. These values were summed for the total score. A total score of 12 was interpreted as sufficiently high risk for LD to merit a referral for a full educational assessment. This screen successfully classified 72.5% of the Phase I participants as having a LD or not.

Screen Development for MMR Assessment:

The eight items used in the second portion of the screening tool are:

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1. *Do you have difficulty or experience problems remembering what you just read?*
2. *Do you have difficulty or experience problems finding a number in the telephone book?*
3. *Do you have trouble understanding things the first time?*
4. *In school, did teachers say, "You're performing below your ability?"*
5. *Were you ever in a special program or given extra help in school?*
6. *Do you have trouble finishing a task or a project?*
7. *Did you experience difficulty memorizing the alphabet?*
8. a. *When you write, which hand do you use? (Check one)*
   b. *Which had do you use the most? (Check one)*
   c. *Pretend this is a telescope. Look up at the sky. (Check which eye)*
   Are eye and hand preferences opposite?

Positive responses were counted. Five or more positive responses were interpreted as sufficiently high risk for an MMR diagnosis to merit a referral for a full educational assessment.

In Phase I, this screen successfully classified 83% of the MMR participants into the high risk for MMR group, and 86% of the participants in the 80+ IQ range into the low risk for MMR group. Two-thirds of the "Slow Learner" participants were classified into the low risk for MMR group. Because these tools were tested using the same dataset that was used for their development, the classification rates achieved using them are likely to be higher than would be found with another dataset. Therefore, the data collected in Phase II of the study were used to validate the tools.

VALIDATION OF THE TOOLS

During Phase II, 479 participants provided information at 11 different CSO sites throughout the state. Of these, 335 (70%) completed both the screening tools and the educational psychological evaluation. Many of the remaining 144 participants withdrew from the project before receiving their educational psychological assessment.

The following table shows the number and percentage of participants in each diagnosis group flagging the need for further assessment. The numbers of participants with a negative result are not displayed in this Table. The first three rows of data represent the number and percentage of participants in each special learning group with a positive identification for each screen. The fourth row of data represents the sum of these first three rows. The final row represents the number and percentage of participants without any diagnosed special learning need to receiving a positive identification on the screen.

Correct Classification by Diagnosis Group for Each Screening Tool

Special Learning Need	Screen I (LD)		% Flagged Screen II (MMR)		Either Screen	
LD	106	69.7%	67	44.1%	110	72.4%
MMR	4	66.7%	3	50.0%	4	66.7%
Slow Learner	17	51%	9	27.3%	19	57.6%
Any Special Learning Need	27	66.5%	78	41.3%	133	69.6%
None	30	20.8%	26	18.1%	36	25.0%

As the table above demonstrates, Screen I (LD) is significantly effective at correctly classifying individuals with LD for further assessment, while miss-classifying few of those without special learning needs. This screen correctly classified 70% of the participants with LD, while incorrectly classifying only about 21% of those without a special learning need. Looking just at these two groups, that represents a 74% correct classification rate overall. This screen would have referred two-thirds of the MMR participants and 52% of the slow learner participants for further assessment as well. This may be considered a positive outcome, as these individuals may also be considered in need of special assistance. Including these groups results in an overall correct classification rate of 72% by Screen I (LD).

Screen II (MMR) was not as effective as Screen I (LD). It correctly classified only 50% of the MMR participants and was not as effective at flagging other special learning needs (overall

41%). The overall correct classification rate for Screen II is 58.8%, most of which is due to correctly ruling out 82% of those without an identified special learning need. Combining results from both screens, 72% of the participants with LDs were correctly classified at having a special learning need, as are 70% of those with any special learning need.

False Positives and False Negatives:

Participants with LD and those without any identified special learning need were sorted into groups depending on whether Screen I correctly classified them for further assessment. False Positives are those without special learning needs who were positively flagged by the screen (n+30; 29.8%); False Negatives are those with LD who were not flagged by the screen (n=46; 30.3%). Comparison of these groups showed that the False Positive participants had significantly lower IQ scores (89) than their non-flagged no-diagnosis counterparts (95). Further, the False Negative participants had significantly higher IQ scores (93) than their correctly flagged counterparts (86). These findings suggest than on average, the participants with LD who were not flagged (false negatives) may be functioning at a higher level than their flagged counterparts. Conversely, the participants receiving a false positive may be functioning at a lower level than their non-flagged counterparts.

Further analysis of background data available from the social worker interview shows that Screen I may be sensitive to health history or that health history may affect learning need. The specific items that differentiate False Positives and False Negatives were:

- Long term substance abuse;
- History of sinus problems; and
- Prolonged high fever.

One-third of the False Positive participants noted that they have had long-term substance abuse, compared with about 15% of the other groups. Almost half of the False Positives noted that they have had multiple sinus problems, compared with about 20% of the other groups. Almost 25% of the False Positive participants reported prolonged high fevers, compared to about 7% of the other participants.

Thus, those with LDs that are missed by Screen I (False Negatives) tend to have higher IQ scores (average of 93), while those without LD that are included by Screen I (False Positives) tend to have lower IQ scores (average of 89). Additionally, the False Positive participants are more likely to report long-term substance abuse problems, multiple sinus problems and prolonged high fevers.

Participants with LDs who were not identified by the screen tended to report lower levels of most health issues. This could reflect a tendency not to note or not to report issues which would have resulted in a positive screen. Conversely, the False Positives participants may either be somewhat more likely to endorse items, which could result in a positive screen, or Screen I could be sensitive to some of these health issues.

CONCLUSION

The LD Project was timely in that it coincided with welfare reform. There is a life time limit of five years for the receipt of TANF. Early intervention is critical in assisting families to move off of welfare and to become self-sufficient. The **Learning Needs Screening Tool** is helpful in identifying possible learning needs or deficits that potentially impact the participant's ability to perform certain tasks such as reading, writing, and working with numbers. This information is helpful in assisting the participant to find occupations that match the participant's strengths and avoid occupations that require performance in areas of weakness.

Persons having LD that are further disadvantaged through poverty, poor health and nutrition, family violence, alcohol and/or substance abuse and other environmental difficulties will most likely face additional challenges. Poor self-esteem, social skills and a lack of education or vocational training will certainly impede successful and meaningful employment.

Participants failing job search or participants demonstrating an inability to remain employed are likely candidates for LD screening. Without early and adequate identification and intervention, LDs can lead to serious consequences for the individual and society including but not limited to; illiteracy, low of self-esteem, failure to obtain adequate education, and other critical problems.

Until an individual's functional ability is known, it may be difficult to know what accommodations, if any are necessary. Perhaps most important is the employer's knowledge that the individual may have special challenges that will need accommodation. Effective communication among case manager, job service specialist, participant and employer is essential. Education and awareness on the part of the employer may be the most significant variable in successful employment.

ACTION STEPS

- Make the Learning Needs Screening Tool available statewide to all WorkFirst Case Managers and Social Workers.
- Continue to train staff on the impact of LDs and employment and in how to assist participants in job search and job retention.
- Work closely with Division of Vocational Rehabilitation (DVR) to improve referral process for those participants who could benefit from DVR services.
- Assist participant's access to appropriate short-term educational and training opportunities through local social service agencies and community colleges that will enhance the participant's ability to obtain and maintain employment.
- Assist participants to access information about his or her disability and develop personal accommodation strategies.