

	Morning	Afternoon	Evening
N	38,823	15,749	32,532
%	30.1	14.6	30.2
Employed	59,567	27,495	10,063
%	55.2	60.2	22.0
Unemployed	27,495	5,465	1,159
%	66.3	34.8	14.0
Retired	5,465	1,159	1,159
%	14.5	7.6	14.0

## Preliminary Findings of Learning Gains for Adult Learners with Developmental Disabilities

*Public perception of adults with developmental disabilities realizing learning gains often remains illusive. This study reports overall learning gains for each of three program years as well as by classification of mental retardation. In addition, the study reports learning gains for adults remaining in their programs across all three program years. The study illustrates progression in learning for adults with mental retardation, especially for those remaining in programs for three consecutive years.*

*Studies reporting standardized assessment results for adults classified with mental retardation typically relate to diagnosis and program placement. The California Department of Education and the California Department of Developmental Services support programs in adult education for adults with disabilities. Annual reports of achievement in basic skills document accountability efforts as part of the Workforce Investment Act (WIA), Title II, Adult Education and Family Literacy.*

The purpose of this paper is to highlight key findings in achievement in basic skills for adults with mental retardation on a functional assessment in a life skills context for three program years (2003-2006). In this study the time period between the pre- and post-test was approximately one year. The study reports overall learning gains for each of the three program years as well as by classification of mental retardation. In addition, the study reports learning gains for adults remaining in their programs across all three program years.

### ► Research Question

This research brief highlights key findings that are a subset of a larger study CASAS is conducting. The larger study explores instructional practices as well as other demographic factors associated with increased learning outcomes of adult students with mental retardation taking a functional assessment. This paper addresses the first in a series of research questions analyzing the three-year data set. It highlights longitudinal changes in performance gains over a three-year period. The specific research question is below.

What learning gains in basic skills do adult learners classified with

mental retardation achieve on a functional assessment in a single program year and across multiple program years, and how do these learning gains vary by classification of mental retardation?

### ► Study Sample

The study sample included adult learners classified with a primary disability of mental retardation enrolled in California WIA Title II adult basic skills programs. Specifically, the study analyzed paired pre- and post-test data for all learners with mental retardation within a program year. This resulted in a database that included 1,764 learners in 2003-04, 1,747 learners in 2004-05, and 1,953 learners in 2005-06. CASAS conducted additional analysis for 562 learners who had paired assessment data in all three program years. Adult education learners included those enrolled in both adult schools and developmental centers in California.

The sample was generally comparable in demographic factors for each of the three program years. Most learners were white, male, and reported as completing fewer than six years of schooling. The largest percentage of learners was between 25 and 44 years of age. Developmental centers served a higher number of learners classified with severe mental retardation. These general demographic trends held across all three program years.

### ► Methods and Procedures

The instrument used to measure achievement in basic skills was the CASAS POWER assessment. POWER (Providing Options for the Workplace, Education, and Rehabilitation) is a standardized observation-based assessment instrument for adults with developmental disabilities, specifically mental retardation. Test administrators rate the prompting levels or levels of supports that learners need to successfully perform functional basic skills for living independently in the home, community, and workplace. They measure achievement on the assessment by calculating learning gains observed from the pretest to the post-test.

For each of the three program years analyzed in this study (2003-04, 2004-05, and 2005-06), the initial valid pretest scores were reported by the NRS functioning levels for ABE Beginning Basic Education (201-210) and Beginning ABE Literacy (200 and below). Beginning ABE Literacy levels were further grouped into five CASAS Pre-Beginning levels established for learners with developmental disabilities.

- 211> Intermediate Basic Skills
- 201-210 Beginning Basic Skills
- 191-200 Beginning Literacy
- 181-190 Pre-Beginning or mild mental retardation
- 161-180 Pre-Beginning or moderate mental retardation
- 141-160 Pre-Beginning or severe mental retardation
- 140 and below – Pre-Beginning or profound mental retardation

The study then determined learning gains for all learners who took both a pretest and a post-test in one of three sets of POWER test forms (basic independent living, community access, and employability) during a program year. The difference between pre- and post-test scores represents a definition of learning gains. They are summarized by looking at the mean gain.

The study also reports learning gains by classification of mental retardation (mild, moderate, or severe). Finally, the study identified all students taking a pre- and post-test in each of the three program years and calculated their learning gains from the pretest in 2003-04 to the post-test in 2005-06.

### ► Key Findings

Mean learning gains within a given program year for the total sample were similar across all three program years, ranging from 2.5 and 2.8 points (see Tables 1a, 1b and 1c). The learning gains were highest among those learners classified with mild mental retardation, ranging from 3.0 to 6.1 (see Tables 2a, 2b and 2c); somewhat lower for learners classified with moderate mental retardation, ranging from 2.7 to 3.7 (see Tables 3a, 3b and 3c); and were lowest among those classified with severe mental retardation, ranging from 1.0 to 2.3 (see Tables 4a, 4b and 4c). The difference in learning gains by

classification of mental retardation was less pronounced in year two of the three-year study. Across all three program years, 36 percent of learners with paired data achieved a learning gain of three points or higher during a single program year.

Figures 1 and 2 illustrate that three-year patterns of growth for the three classifications of mental retardation vary. The learning gains for learners with mild mental retardation diminish from year one to year three of the study. The learning gains for those with moderate mental retardation decrease the second year and remain stable for the third year. In contrast, the learning gains for those with severe mental retardation continue to increase in years two and three of the study.

Results for 562 learners with paired pre- and post-test data indicate some progression in learning gains over three years. Learners taking pre- and post-tests for three consecutive years showed an average learning gain of 6.1 (see Table 5a). Consistent with previous findings and as shown in Table 5b, learners classified with mild mental retardation showed higher learning gains (8.3 points, N=50) compared to those with moderate mental retardation as shown in Table 5c (7.1 points, N=201) and severe mental retardation as shown in Table 5d (4.5 points, N=294).

### ► Discussion and Further Research

Learners at all levels of mental retardation are achieving learning gains. Those with moderate and mild mental retardation achieve higher gains compared to those with severe mental retardation. These learners continue to show gains across multiple program years.

Further research will focus on long-term analysis (four or five program years) to see if adult learners continue to achieve similar learning gains over longer periods of time. Additional research will include analysis of specific POWER test forms and content areas as well as specific items and activities that comprise these forms. Analysis at the micro level will study growth patterns at the individual student level. The research will include studying the effects of specific teaching strategies and other characteristics of the instructional stage associated with learning gains.

► All Learners Classified with Mental Retardation

**Table 1a**

*Learning Gains – All Learners with Paired Data, 2003-04*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	137.7	5.0	49	2.8
141-160	153.0	1.9	865	49.0
161-180	168.8	3.5	591	33.5
181-190	185.0	4.7	130	7.4
191-200	194.9	4.2	74	4.2
201-210	205.0	2.9	40	2.3
211+	216.5	-7.9	15	0.9
Total	163.7	2.8	1,764	100.0

**Table 1b**

*Learning Gains – All Learners with Paired Data, 2004-05*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	138.0	9.2	58	3.3
141-160	152.9	1.6	781	44.7
161-180	169.4	2.5	602	34.5
181-190	184.8	3.2	128	7.3
191-200	195.1	4.6	85	4.9
201-210	205.5	3.9	60	3.4
211+	217.9	0.9	33	1.9
Total	165.5	2.5	1,747	100.0

**Table 1c**

*Learning Gains – All Learners with Paired Data, 2005-06*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	130.1	6.4	158	8.1
141-160	152.5	3.6	522	26.7
161-180	170.1	2.6	824	42.2
181-190	184.9	1.5	194	9.9
191-200	194.9	2.9	124	6.3
201-210	205.4	1.5	77	3.9
211+	217.7	-4.1	54	2.8
Total	167.9	2.8	1,953	100.0

► Learners Classified with Mild Mental Retardation

**Table 2a**

*Learning Gains – All Learners with Paired Data and Classified with Mild Mental Retardation, 2003-04*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	139.0	1.0	3	1.2
141-160	154.9	14.5	22	8.8
161-180	172.2	7.5	105	41.8
181-190	185.7	7.3	49	19.5
191-200	195.4	3.5	43	17.1
201-210	205.2	2.8	17	6.8
211+	216.8	-10.6	12	4.8
Total	181.3	6.1	251	100.0

**Table 2b**

*Learning Gains – All Learners with Paired Data and Classified with Mild Mental Retardation, 2004-05*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	137.0	0.0	1	0.4
141-160	156.5	11.5	10	3.9
161-180	173.4	4.0	125	49.2
181-190	184.8	2.5	43	16.9
191-200	195.3	7.0	31	12.2
201-210	205.0	5.6	25	9.8
211+	218.4	1.6	19	7.5
Total	183.6	4.4	254	100.0

**Table 2c**

*Learning Gains – All Learners with Paired Data and Classified with Mild Mental Retardation, 2005-06*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	--	--	0	0.0
141-160	155.9	8.7	11	2.6
161-180	172.1	4.3	213	51.1
181-190	187.7	0.6	87	20.9
191-200	194.5	1.2	51	12.2
201-210	204.9	5.5	23	5.5
211+	216.9	-0.2	32	7.7
Total	182.3	3.0	417	100.0

► **Learners Classified with Moderate Mental Retardation**

**Table 3a**

*Learning Gains – All Learners with Paired Data and Classified with Moderate Mental Retardation, 2003-04*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	136.4	3.3	10	1.8
141-160	151.8	3.0	170	30.6
161-180	169.8	4.2	261	46.9
181-190	184.5	3.2	65	11.7
191-200	194.1	4.2	26	4.7
201-210	204.6	2.9	21	3.8
211+	215.0	2.7	3	0.5
<b>Total</b>	<b>168.1</b>	<b>3.7</b>	<b>556</b>	<b>100.0</b>

**Table 3b**

*Learning Gains – All Learners with Paired Data and Classified with Moderate Mental Retardation, 2004-05*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	138.7	7.0	6	1.3
141-160	154.2	2.3	82	17.7
161-180	170.3	2.8	248	53.4
181-190	184.6	3.5	64	13.8
191-200	194.7	2.9	34	7.3
201-210	205.3	0.2	24	5.2
211+	215.7	-2.8	6	1.3
<b>Total</b>	<b>173.2</b>	<b>2.7</b>	<b>464</b>	<b>100.0</b>

**Table 3c**

*Learning Gains – All Learners with Paired Data and Classified with Moderate Mental Retardation 2005-06*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	128.9	7.3	8	1.3
141-160	155.3	6.3	104	17.3
161-180	170.5	2.4	326	54.2
181-190	184.8	2.6	68	11.3
191-200	195.3	3.4	45	7.5
201-210	206.1	-1.7	39	6.5
211+	219.7	-14.5	12	2.0
<b>Total</b>	<b>174.1</b>	<b>2.7</b>	<b>602</b>	<b>100.0</b>

► **Learners Classified with Severe Mental Retardation**

**Table 4a**

*Learning Gains – All Learners with Paired Data and Classified with Severe Mental Retardation, 2003-04*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	138.0	5.8	36	3.9
141-160	153.2	1.2	672	73.6
161-180	165.9	-0.4	199	21.8
181-190	185.3	-4.8	6	0.7
191-200	--	--	0	0.0
201-210	--	--	0	0.0
211+	--	--	0	0.0
<b>Total</b>	<b>155.6</b>	<b>1.0</b>	<b>913</b>	<b>100.0</b>

**Table 4b**

*Learning Gains – All Learners with Paired Data and Classified with Severe Mental Retardation, 2004-05*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	138.1	9.6	49	5.4
141-160	152.7	1.3	671	73.4
161-180	165.2	1.0	190	20.8
181-190	181.0	-4.0	1	0.1
191-200	193.0	-2.0	3	0.3
201-210	--	--	0	0.0
211+	--	--	0	0.0
<b>Total</b>	<b>154.7</b>	<b>1.7</b>	<b>914</b>	<b>100.0</b>

**Table 4c**

*Learning Gains – All Learners with Paired Data and Classified with Severe Mental Retardation, 2005-06*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	130.3	6.2	140	20.3
141-160	151.5	2.4	377	54.6
161-180	166.2	-1.0	164	23.8
181-190	184.0	-10.0	4	0.6
191-200	193.8	2.8	4	0.6
201-210	201.0-	-4.0	1	0.1
211+	--	--	0	0.0
<b>Total</b>	<b>151.2</b>	<b>2.3</b>	<b>690</b>	<b>100.0</b>

► Learners with Pre- and Post-Tests in Each of Three Program Years

**Table 5a**

*Learning Gains – All Learners Pre- and Post-Tested in Each of Three Program Years*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	137.6	20.5	8	1.4
141-160	153.4	6.0	245	43.6
161-180	168.7	4.3	216	38.4
181-190	184.9	10.0	43	7.7
191-200	194.4	10.3	32	5.7
201-210	205.2	4.7	18	3.2
211+	--	--	0	0.0
<b>Total</b>	<b>165.5</b>	<b>6.1</b>	<b>562</b>	<b>100.0</b>

**Table 5b**

*Learning Gain – Learners Pre- and Post-Tested in Each of Three Program Years with Mild Mental Retardation*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	--	--	0	0.0
141-160	156.0	21.3	3	6.0
161-180	174.1	7.0	27	54.0
181-190	185.1	7.4	11	22.0
191-200	194.6	8.3	8	16.0
201-210	202.0	16.0	1	2.0
211+	--	--	0	0.0
<b>Total</b>	<b>179.3</b>	<b>8.3</b>	<b>50</b>	<b>100.0</b>

**Table 5c**

*Learning Gains – Learners Pre- and Post-Tested in Each of Three Program Years with Moderate Mental Retardation*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	136.0	33.0	1	0.5
141-160	154.3	8.1	15	7.5
161-180	169.6	5.6	119	59.2
181-190	184.9	11.0	28	13.9
191-200	194.2	10.6	22	10.9
201-210	205.1	3.7	16	8.0
211+	--	--	0	0.0
<b>Total</b>	<b>176.0</b>	<b>7.1</b>	<b>201</b>	<b>100.0</b>

**Table 5d**

*Learning Gains – Learners Pre- and Post-Tested in Each of Three Program Years with Severe Mental Retardation*

POWER Scoring Range	Pretest Mean	Learning Gain Mean	N	%
< 140	137.9	18.7	7	2.4
141-160	153.3	5.6	227	77.2
161-180	164.4	-1.5	60	20.4
181-190	--	--	0	0.0
191-200	--	--	0	0.0
201-210	--	--	0	0.0
211+	--	--	0	0.0
<b>Total</b>	<b>155.2</b>	<b>4.5</b>	<b>294</b>	<b>100.0</b>

**Figure 1**

*Mean Learning Gains by Program Year and Across Program Years*

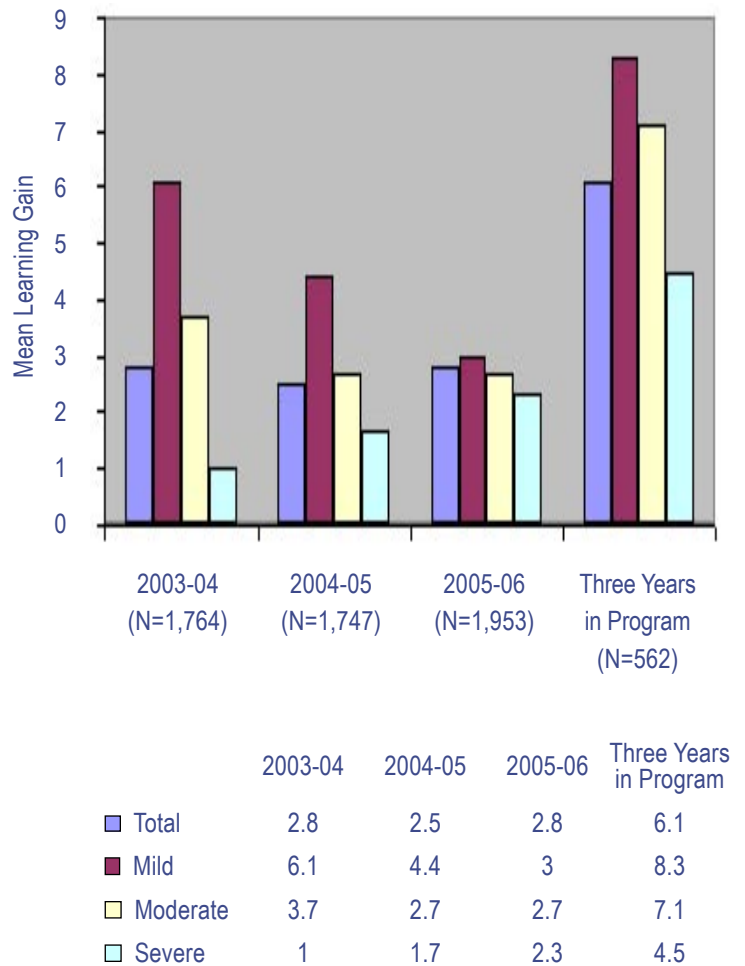
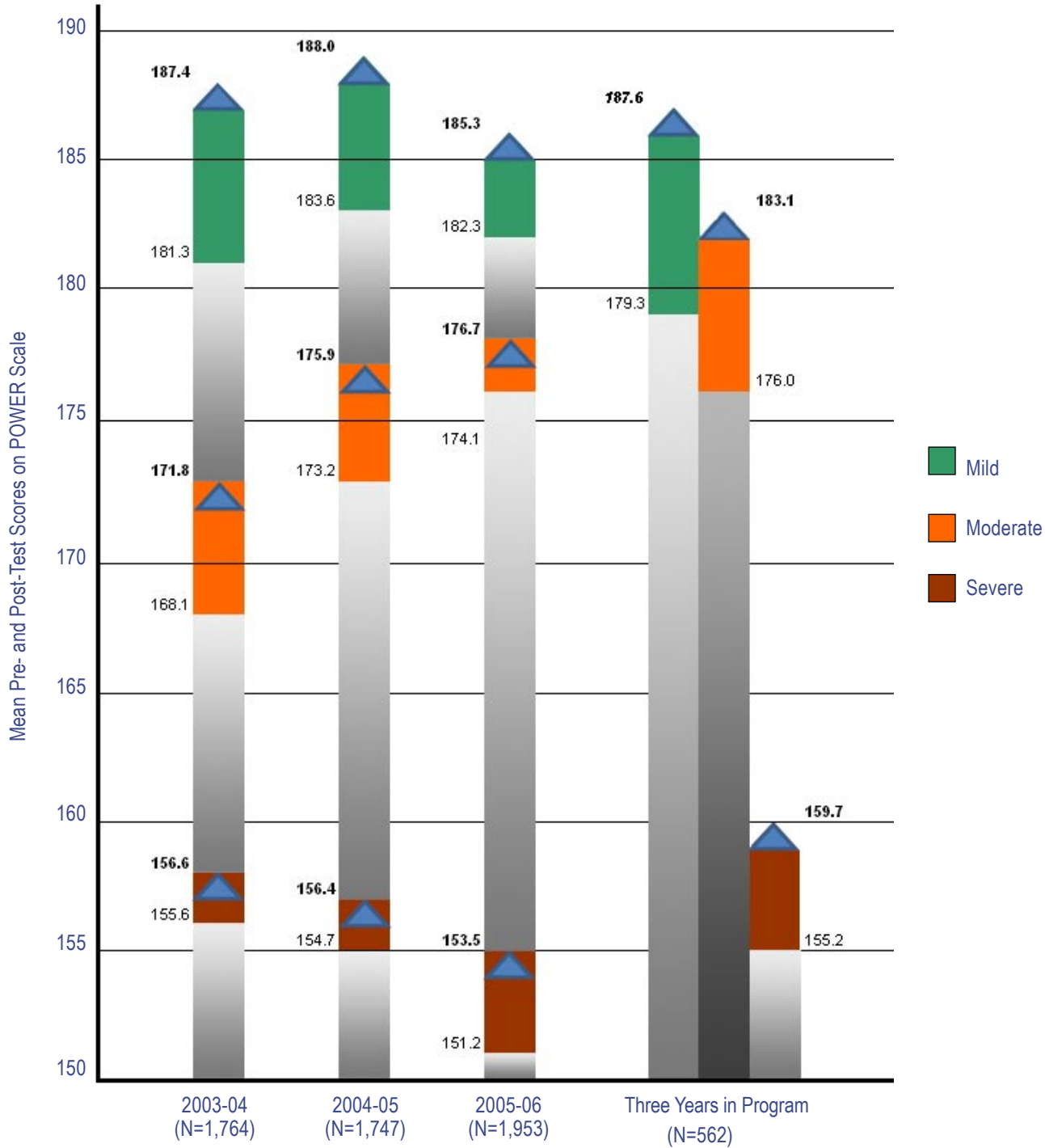


Figure 2 Pre- to Post-Test Gains for Three Levels of Developmental Disabilities from 2003-06



Source: California WIA Title II Database for Adults with Developmental Disabilities

**About the Authors**

Virginia Posey, Ph.D., Sr. Research Associate  
 Jared Jacobsen, Consultant, CASAS Research

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