

Use of Progress Monitoring at the State Level for Decision Making:

Three Years of Research-Based Decision Making -
The Statewide Progress Monitoring Initiative in
Pennsylvania

Edward S. Shapiro, Ph.D.
Center for Promoting Research to Practice,
Lehigh University
University Consultant for PaTTAN

Presentation to **Advances in Progress Monitoring:
Curriculum-Based Measurement Research & Innovations**
Minneapolis, MN, May 5-6, 2006

Statewide Plan for PM

- Original mini-pilot in spring, 2002
- Larger, statewide pilot, 2002 -2003
 - 14 districts (5 east, 4 central, 5 west)
 - 5 teachers each district
 - Each teacher monitored at least one student in reading and one in math
 - Training and consultation provided by university consultants
 - 3 training sessions plus 1 on site visit over 8 months
- Results showed success
 - Feasible
 - Student outcomes were very positive
 - Teachers used various instructional interventions
- Statewide Training and Data Collection in 2003 -2004
- Two year follow-up of original 14 districts in statewide pilot in spring 2005
- Statewide Training and Data Collection in 2004 - 2005

Statewide Plan for PM

- Provide training across as many districts as possible
- Training delivered by PaTTAN, CSPD consultants, and IU consultants
- Teachers required to monitor at least one student in either reading or math
- Data collected and reported to the state on student performance across the year

Outcomes from the Statewide Pilot - 2002 - 2003

- PM was feasible for most teachers
- Skills for collecting and analyzing data were learned
- Some PM situations presented challenges (full inclusion models)
- Teachers needed to learn how to use the data to make instructional decisions
- Teachers found innovative ways to use the data (feedback to parents, IEP incorporation)

Outcomes of PM in PA: 2003 -2004 Data Collection

- 2,690 special education students
- Approximately 300 districts, 29 IU's trained
- LD = 1745; SED = 271; MR = 244
- 1967 = GOM ; 211 = SS; 166 = Behavior; 346 = undetermined
- 1395 = reading; 489 = math computation
- 50.8% weekly collection; 31.8% 2x/week
- FOR LD: 728 Reading, 230 Math

Questions Reading and Math Computation

- Average rate of gain across instructional grade levels?
- Average rate of gain across DIFFERENCES between enrolled and instructional grade levels?

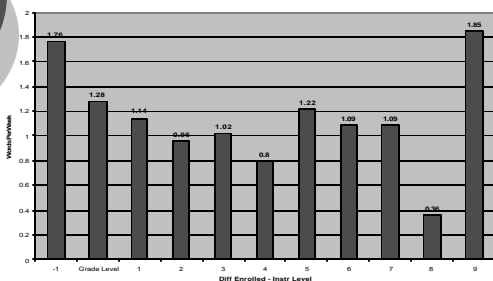
Comparison of PA PM to Fuchs Study in Reading-Instructional Level

Grade	Fuchs Study	All Students	LD
1	n/a	.90	.85
2	1.5	1.04	1.10
3	1.0	1.08	1.06
4	0.85	1.29	1.19
5	0.5	.93	.91
6	0.3	1.24	1.22

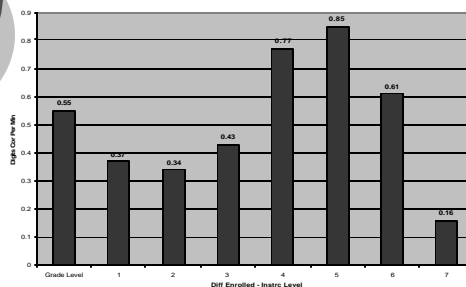
Comparison of PA PM to Fuchs Study in Math Computation-Instructional Level

Grade	Fuchs Study	All Students	LD
1	n/a	.17	.18
2	0.3	.40	.56
3	0.3	.32	.35
4	0.70	.52	.56
5	0.70	.21	.25
6	0.45	.47	.58

Grade Minus Instructional Level - Reading



Grade Minus Instructional Level - Math



Final Conclusions: 2003-2004

- o PM, especially GOM, reflect gains in student performance in reading and math computation
- o Teachers were able to conduct PM on student for entire year
- o PM should be widely adopted as method to reflect basic performance in reading and math
- o Established realistic goals for students with LD
- o Data collected 3 points in time can be used to reflect year long outcomes

2003-2004 Lessons

- o Establish the data collection process at the start of the training year
- o Keep the data collection form simple
- o Focus data collection on GOM progress monitoring only
- o Enhance quality of training

Findings from PM Two Year Pilot Follow-Up

Outcomes of 2-yr Follow-Up

- 14 districts visited
- Interviews with administrators, teachers, and examined student data
- Rated as to their continuation of trained procedures
- 5 rated as continued or expanded
- 7 discontinued or minimally continued
- 2 mixed

Key Variables for Sustainability- All 3 Had to be in Place

- Administrative Mandate
 - The KEYSTONE!
- Continued Professional Development
- Administrative Support

Outcomes of PM in PA 2004 -2005

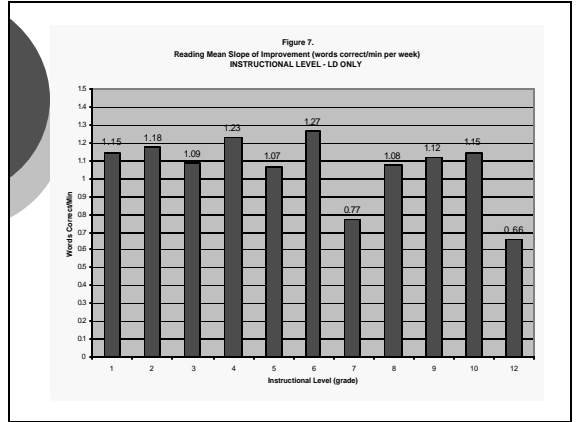
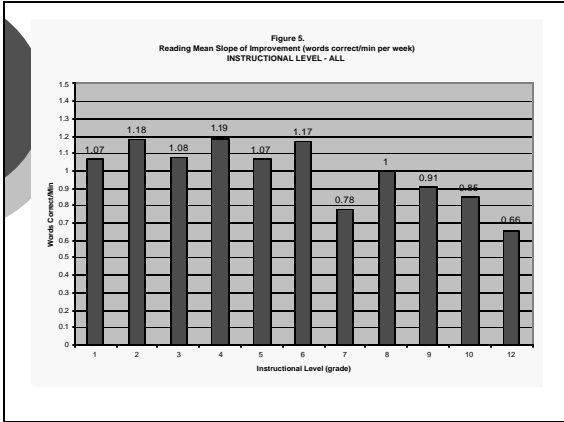
- 1,963 special education students monitored
- 149 districts, 24 IU's
- LD = 1,502 (76.5%); SED = 88 (4.5%); MR = 223 (11.4%)
- 1,654 (84.3%) = reading; 599 = math computation (30.5%) ; 60 = math concepts (3.1%)
- FOR LD: 1,277 Reading; 447 Math computation; 46 = math concepts

Four Questions Reading and Math Computation Data reported for ALL and LD Only

- Average rate of gain across instructional grade levels?
- Average rate of gain across DIFFERENCES between enrolled and instructional grade levels?
- Number of students reaching goals
- Average rate of gain across students whose goals were increased within the year of monitoring?

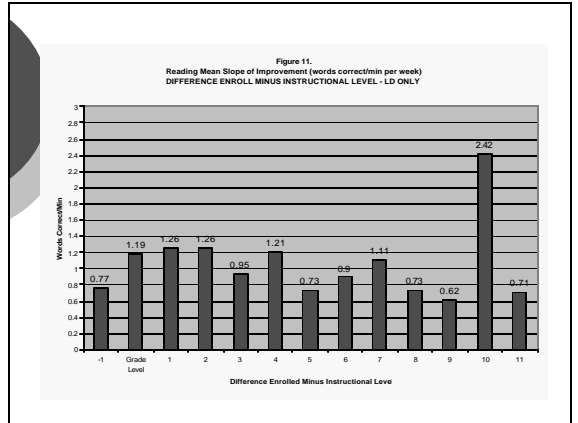
Reading Instructional Grade Level

Grade	ALL Words/Wk	ALL N	LD Words/Week	LD N
1	1.07	245	1.15	173
2	1.18	302	1.18	215
3	1.08	354	1.09	273
4	1.19	294	1.23	249
5	1.07	208	1.07	176
6	1.17	115	1.27	91
7	.78	68	.77	53
8	1.00	23	1.08	13
9	.91	4	1.12	3
10	.85	9	1.15	3
12	.66	4	.66	4
Total	1.11	1626	1.13	1253



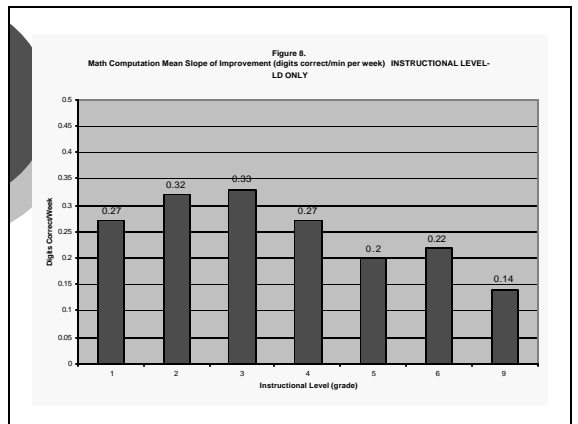
Reading: Enrolled Minus Instructional Level

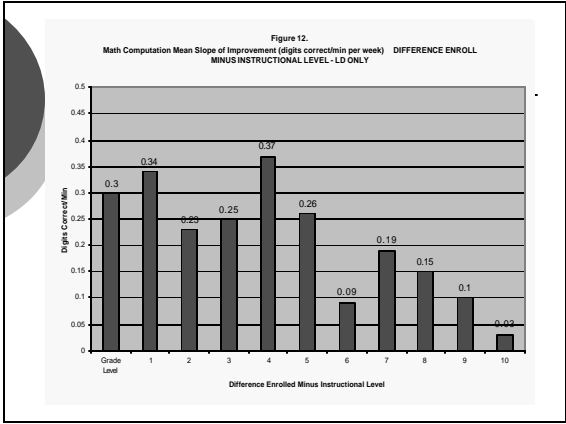
Gap	ALL Words/Wk	ALL N	LD Words/Week	LD N
-2	1.83	3		
-1	.95	10	.77	8
GL	1.13	195	1.19	147
1	1.24	353	1.26	280
2	1.23	363	1.26	306
3	.97	268	.95	211
4	1.10	169	1.21	119
5	.83	102	.73	74
6	.96	61	.90	37
7	.91	55	1.11	40
8	.66	19	.73	12
9	.82	10	.62	6
10	1.67	3	2.42	1
11	.56	2	.71	1



Compute: Instructional Grade Level

Grade	ALL Digits/Wk	ALL N	LD Digits/Wk	LD N
1	.29	75	.27	50
2	.31	98	.32	62
3	.35	157	.33	119
4	.26	152	.27	116
5	.19	59	.20	50
6	.19	28	.22	22
7	.76	1		
9	.14	3	.14	3
Total	.29	573	.28	422





Goal Attainment

Number of students reaching goals - LD

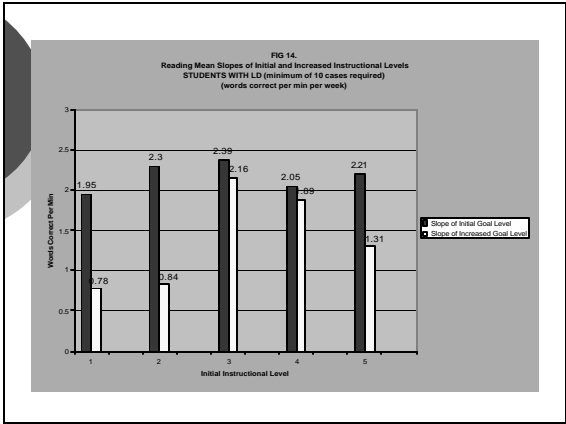
			PM Area		
			Reading	Compute	Concepts
Target Reached recoded	Yes	Frequency	598	153	16
		% within PM AREA	46.8%	34.2%	34.8%
	No	Frequency	679	294	30
		% within PM AREA	53.2%	65.8%	65.2%
Total		Total	1277	447	46
		% within PM AREA	100.0%	100.0%	100.0%

Slope Outcomes for Change of Goals

- o Data only for Reading, insufficient cases in math computation

Reading: Initial and Increased goal level – LD STUDENTS

Initial Goal Level	Slope of Initial Goal Level	Slope of Increased Goal Level
1 n = 22	1.95	0.78
2 n = 33	2.30	0.84
3 n = 17	2.39	2.16
4 n = 14	2.05	1.89
5 n = 10	2.21	1.31
6 n = 5	2.50	2.34
7 n = 1	1.13	1.58

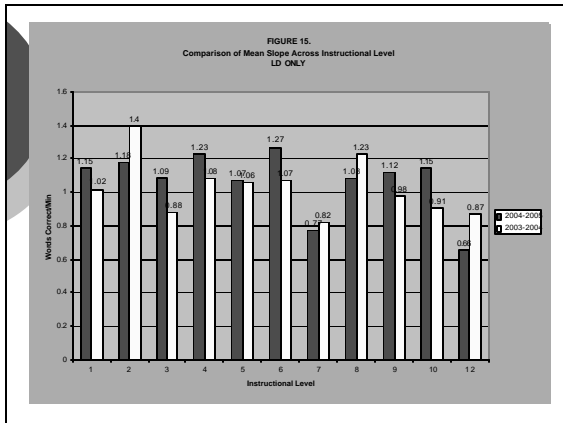


Important Question

- How do the data from PA compare to established gain rates from other studies? Against instructional level?
- How do the data from PA compare to the 2003 -2004 progress monitoring data?

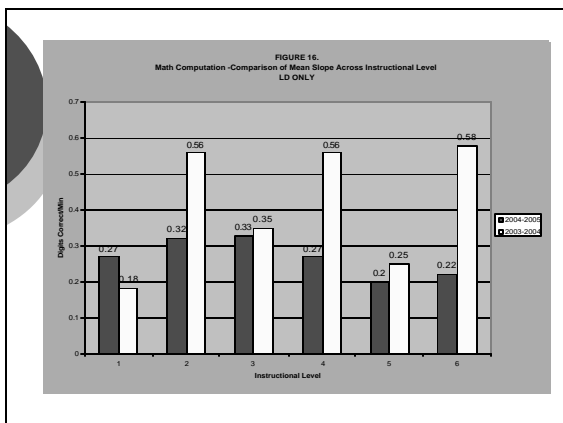
Comparison of PA PM to Fuchs Study in Reading-Instructional Level

Grade	Fuchs Study Reg Ed	All SpED Students 2004 - 2005	LD 2004 - 2005	All SpED Students 2003 - 2004	LD 2003 - 2004
1	2.0	1.07	1.15	1.02	.85
2	1.5	1.18	1.18	1.40	1.10
3	1.0	1.08	1.09	.88	1.06
4	0.85	1.19	1.23	1.08	1.19
5	0.5	1.07	1.07	1.06	.91
6	0.3	1.17	1.27	1.07	1.22



Comparison of PA PM to Fuchs Study in Compute-Instructional Level

Grade	Fuchs Study Reg Ed	PDE Benchmarks	All SpED Students 2004 - 2005	LD 2004 2005	All SpED Students 2003- 2004	LD 2003 - 2004
1	n/a	.3	.29	.27	.17	.18
2	0.3	.3	.31	.32	.40	.56
3	0.3	.3	.35	.33	.32	.35
4	0.70	.45	.26	.27	.52	.56
5	0.70	.45	.19	.20	.21	.25
6	0.45		.19	.22	.47	.58



Final Conclusions

- GOM Progress Monitoring reflected substantial gains in student performance over time in both reading (oral reading fluency) and math (math computation).
- Improvements were the same for all students monitored across categories of disability as well as those with LD.
- GOM Progress Monitoring should continue to be widely adopted as a mechanism to reflect student performance in basic reading and math computation for students with disabilities.

Final Conclusions

- Goals for expected rates of improvement for students with LD can be expected across all instructional levels to gain at least 1.0 to 1.2 words correct per minute per week in reading.
- Goals for expected rates of improvement for students with LD can be expected across all instructional levels to gain at least 0.20 to 0.30 digits correct per minute per week in math computation.

2006 Survey of CBM Training in Special Education Across PA

- **29** Intermediate Units Responded to the Survey.
- These IUs serve 501 LEAs
- 433 of these 501 (86%) of PA's LEAs have received Level I Progress Monitoring Training.

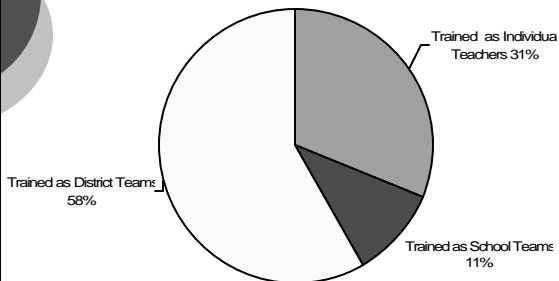
Overview

- **29** Intermediate Units Responded to the Survey.
- These IUs serve 501 LEAs
- 433 of these 501 (86%) of PA's LEAs have received Level I Progress Monitoring Training.

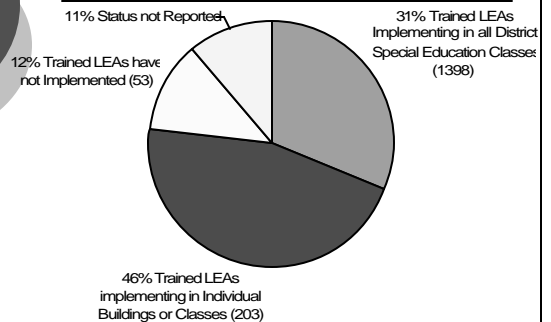
Overview

- 201 of the 433 (46%) trained LEAs provided turn-around training.
- 377 progress monitoring events were provided thus far in the 05-06 school year.
- 162 events are planned for the remainder of the year.

Training Format



Implementation





Final Comments

- Confidence in PM as a valuable tool for monitoring student progress in special education
- Evidence of accountability
- Evidence of growth for students in special ed (LD in particular)
- Replication and strengthening of research findings over years
- Direct implications of research-to-practice