



Research that Supports High Performing Middle Grade Schools

Presented by:

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Summary

Purpose of presentation is to present large-scale, scientifically-based research studies demonstrating a link between middle grades teaching and learning practices and student outcomes, preferably student test scores.



Research supporting National Forum's Vision

- Lee & Smith (1993)
- Felner et al. (1997)
- Chicago Consortium studies (1990's)
- Southern Regional Education Board
- CPRD – University of Illinois
- Other studies



Lee & Smith (1993)

Purpose: To evaluate impact of school restructuring on student achievement and related outcomes

Sample: NELS:88 data from over 8,800 8th grade students in 377 schools

Results: Elements of restructuring were positively associated with academic achievement and engagement.

- ▶ modest increases in academic achievement (e.g., reading & mathematics)
- ▶ increase in student engagement (e.g., homework, feeling bored, prepared for class)
- ▶ greater equity of student outcomes



Felner et al. (1997)

Purpose: Assess & evaluate impact of *Turning Points'* recommendations on middle grades reform (achievement, social-emotional, and behavioral)

Sample: Survey and achievement data from 31 Illinois schools in 1990-92.

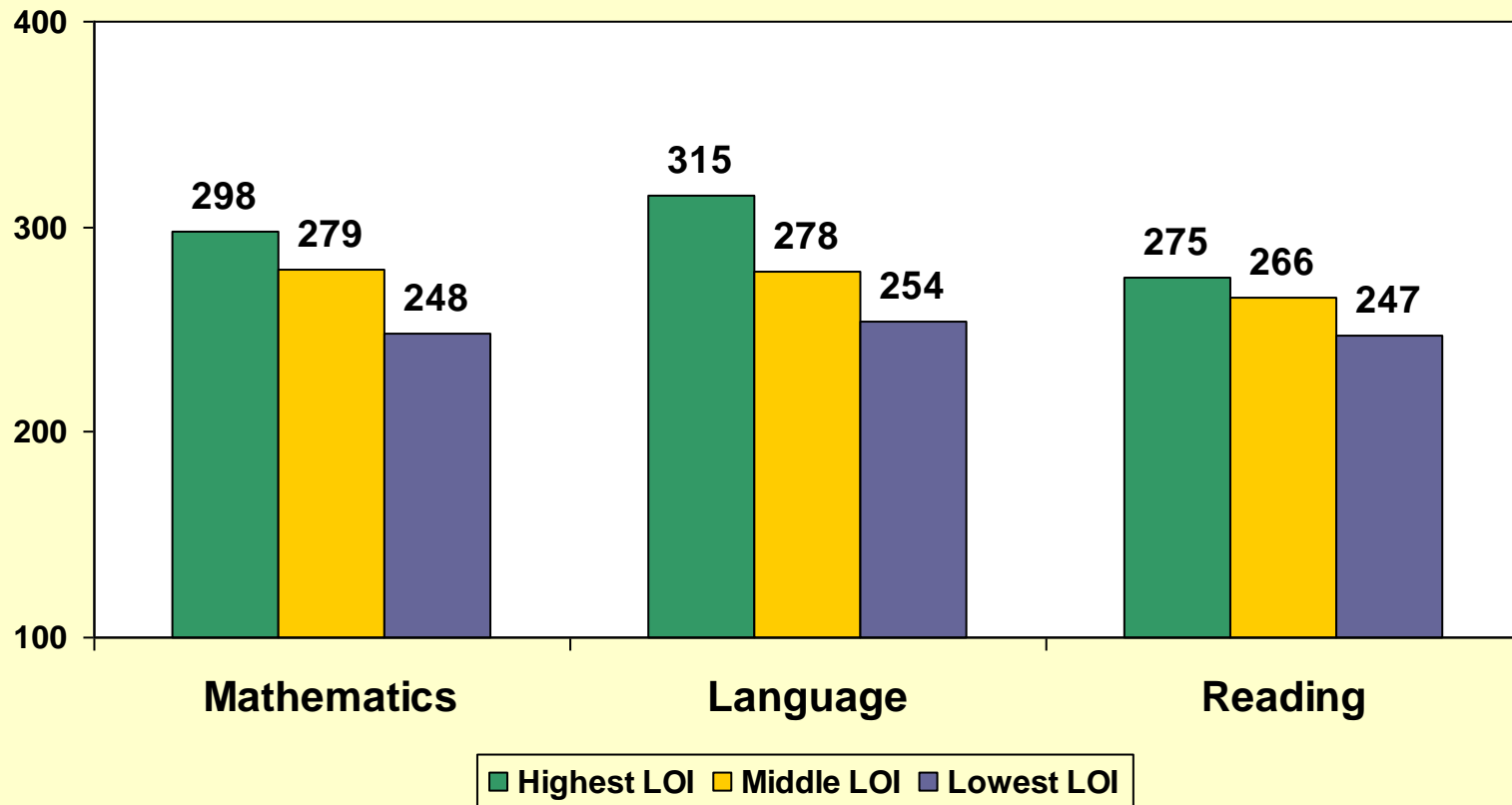
Results: Students in more highly implemented schools had higher achievement and better adjustment

- ▶ Higher achievement in more highly implemented schools (language arts, reading, and math)
- ▶ Lower levels of behavior problems in more highly implemented schools.
- ▶ Students in highly implemented schools had higher levels of self-esteem and lower levels of worry and fear.

The Impact of School Reform for the Middle Years

(Felner, Jackson, Kasak, Mulhall, Brand, & Flowers – March 1997)

Figure 1. Student Achievement Test Scores by Schools' Level of Implementation (LOI)

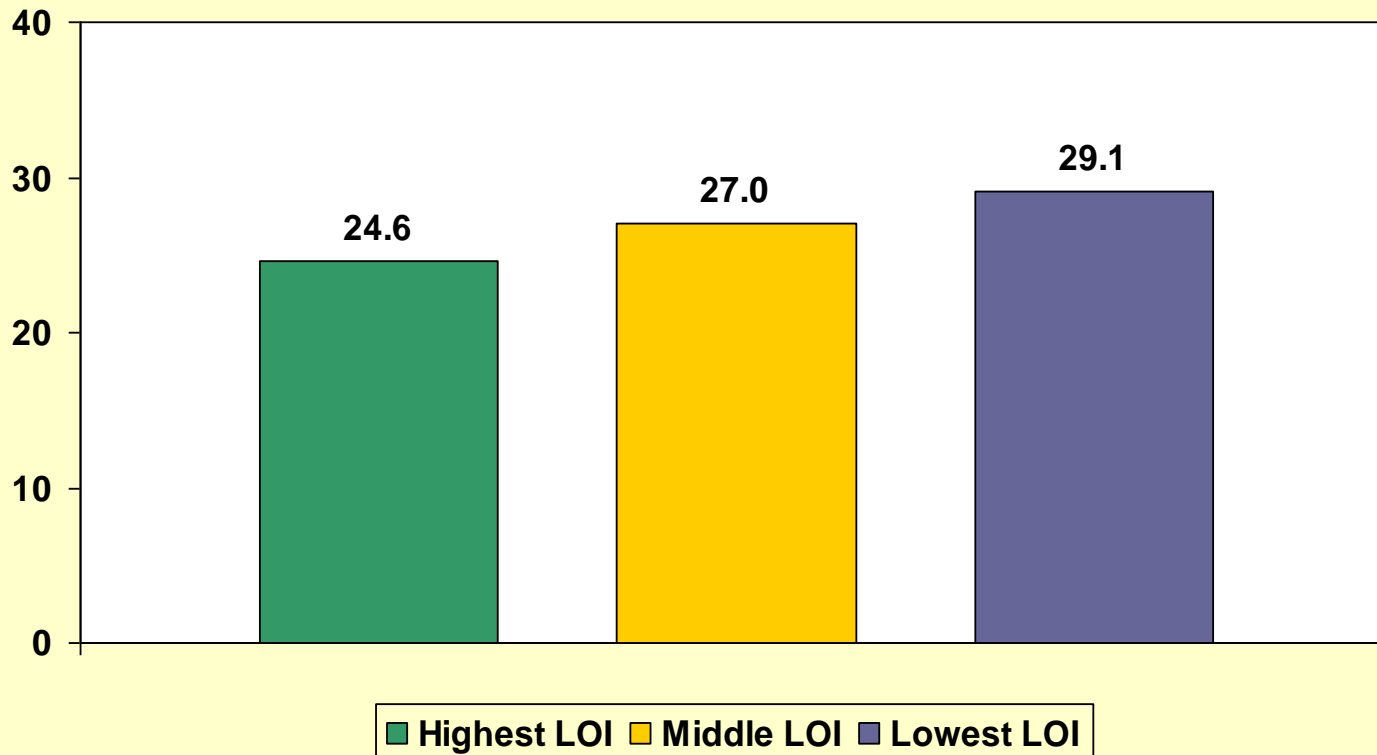


State Mean: 250
Std Dev: 50

The Impact of School Reform for the Middle Years

(Felner, Jackson, Kasak, Mulhall, Brand, & Flowers – March 1997)

Figure 2. Teacher Ratings of Student Behavior Problems by Schools' Level of Implementation (LOI)

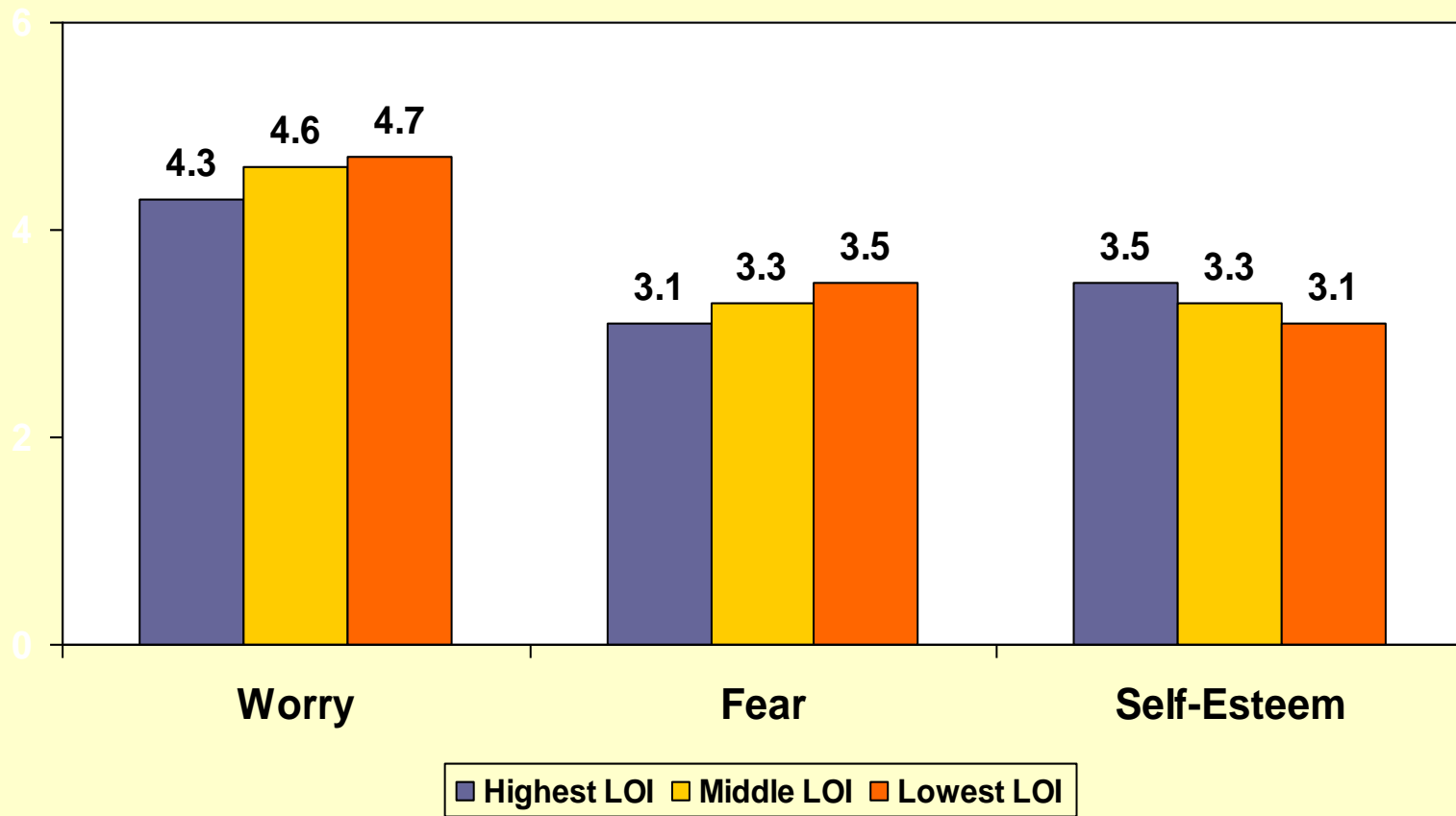


* Total of reported aggression, moodiness/shyness, and learning difficulties. Lower values indicate better scores. All group differences are significant.

The Impact of School Reform for the Middle Years

(Felner, Jackson, Kasak, Mulhall, Brand, & Flowers – March 1997)

Figure 3. Student Self-Reports of Adjustment* by Schools' Level of Implementation (LOI)



* Scores are average item responses to allow for comparability across scales. All scales have 1-5 item response choices.

Citation: Felner, R. D., Jackson, A. W., Kasak, D., Mulhall, P., Brand, S., & Flowers, N. (1997). The impact of school reform for the middle years: Longitudinal study of a network engaged in Turning Points-based comprehensive school transformation. *Phi Delta Kappan*, 78(7), 528-532, 541-550.



Chicago Consortium Studies

Purpose: To study the relationships of student social support and academic press to gains in student achievement.

Sample: Survey and achievement data from 6th & 8th grade students and teachers in 304 Chicago schools in 1997.

Results: Levels of both social support and academic press are positively related to gains in achievement.

- ▶ Social support & academic press impact student achievement (reading & math); combined effect produces greatest achievement gains
- ▶ Students attending the least racially integrated, lowest-achieving, economically poorest, and largest schools are least likely to experience the combined impact of support and press known to impact student achievement

Social Support, Academic Press, and Student Achievement: A View from the Middle Grades in Chicago

(Lee, Smith, Perry, & Smylie – October 1999)

Figure 1
Student Social Support: Relationship to Average Gains in Reading and Math Achievement
6th and 8th Graders

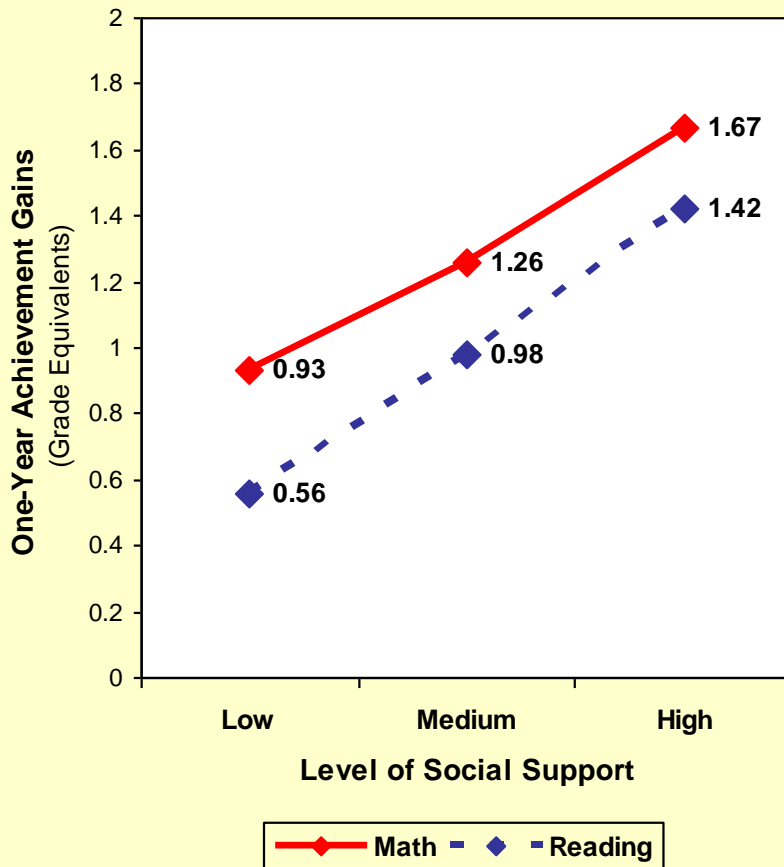
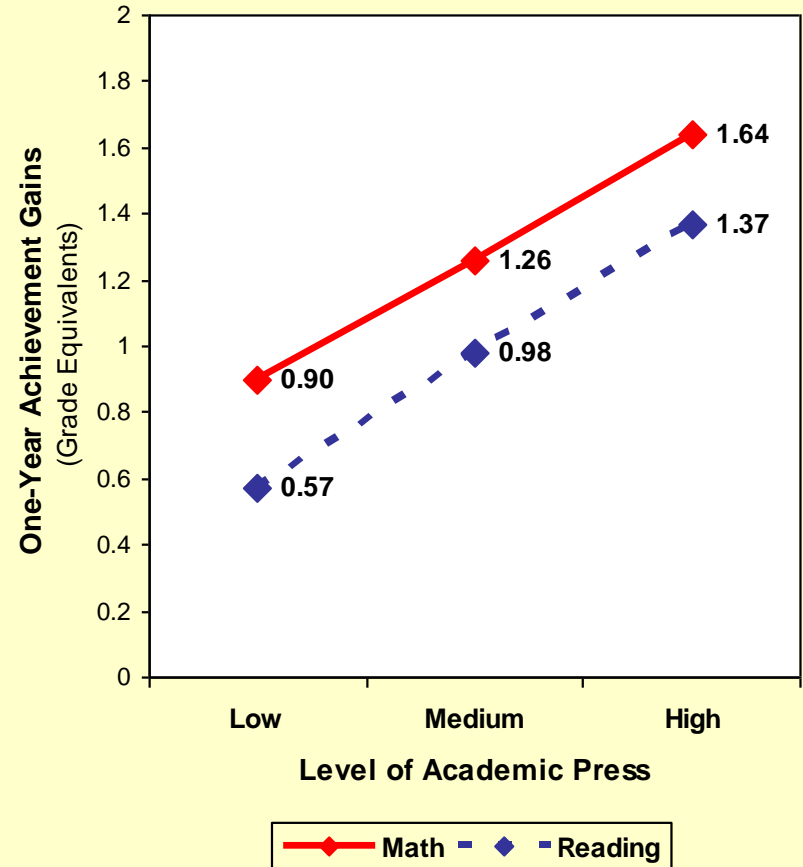


Figure 2
School Academic Press: Relationship to Average Gains in Reading and Math Achievement
6th and 8th Graders



Social Support, Academic Press, and Student Achievement: A View from the Middle Grades in Chicago

(Lee, Smith, Perry, & Smylie – October 1999)

Figure 3
Reading Gains in Schools Combining High Levels of Social Support and Academic Press

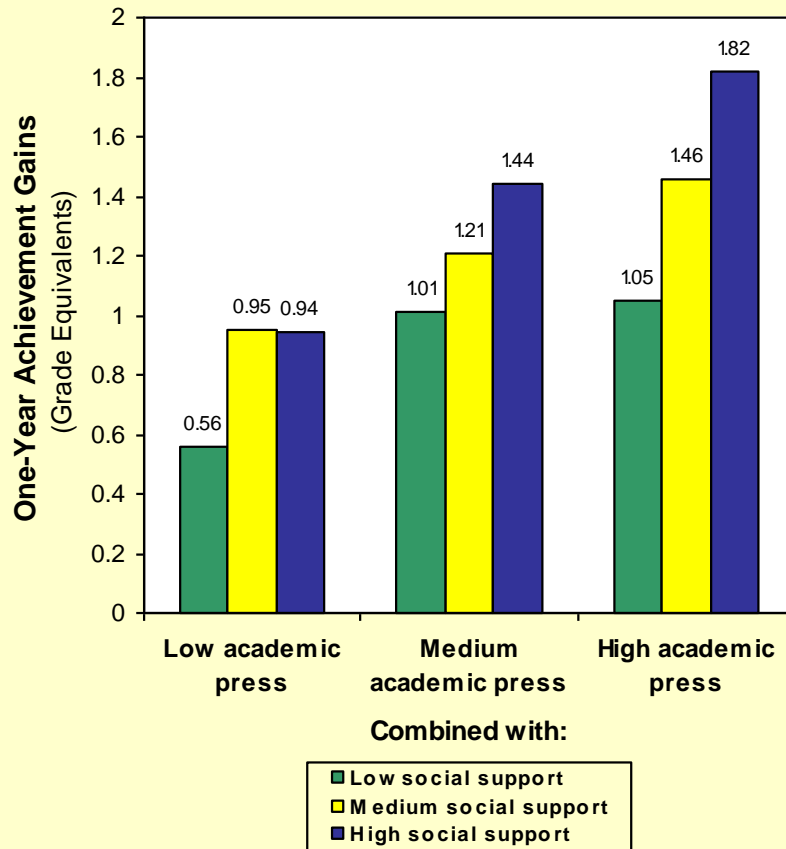
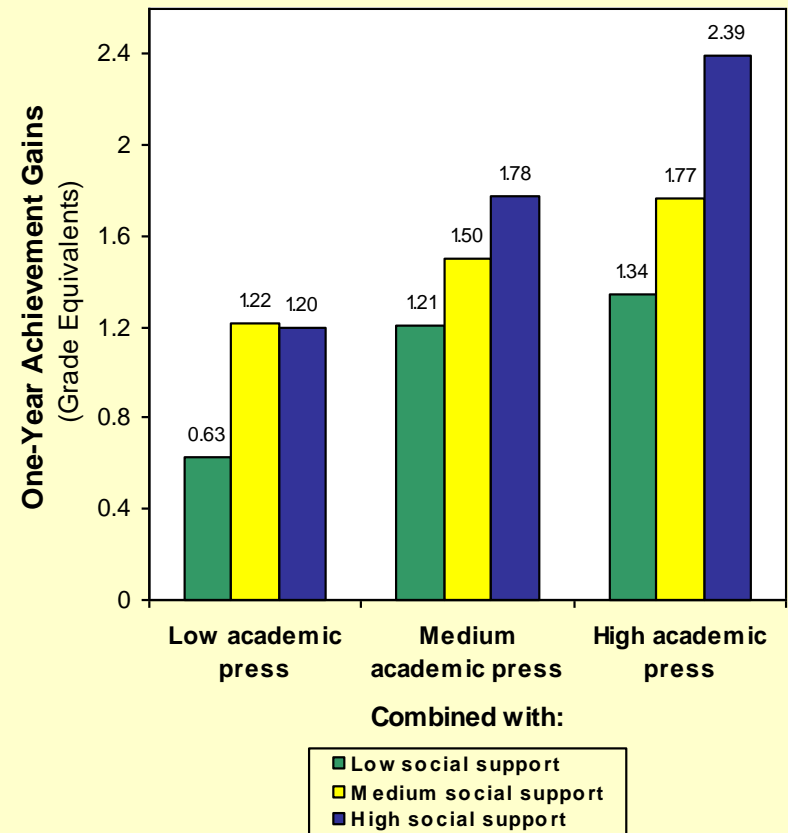


Figure 4
Math Gains in Schools Combining High Levels of Social Support and Academic Press





Southern Regional Education Board

Purpose: To measure whether eighth grade students in *MMGW* schools have high student achievement .

Sample: Survey and achievement data from teachers and 8th grade students in 52 in 16 states in 2000 & 2002.

Results: Students in *MMGW* schools showed higher achievement gains.

- ▶ *MMGW* schools in network for at least 3 years had statistically higher achievement in reading and math. Finding is true for African-American students and students whose mothers have a HS education or less.
- ▶ 8th grade students who reported intensive literacy, math, and science experiences had significantly higher reading, math, and science achievement, regardless of race/ethnicity and mothers' educational levels.



CPRD – University of Illinois

Purpose: Assess & evaluate impact of comprehensive school reform elements on middle grade schools

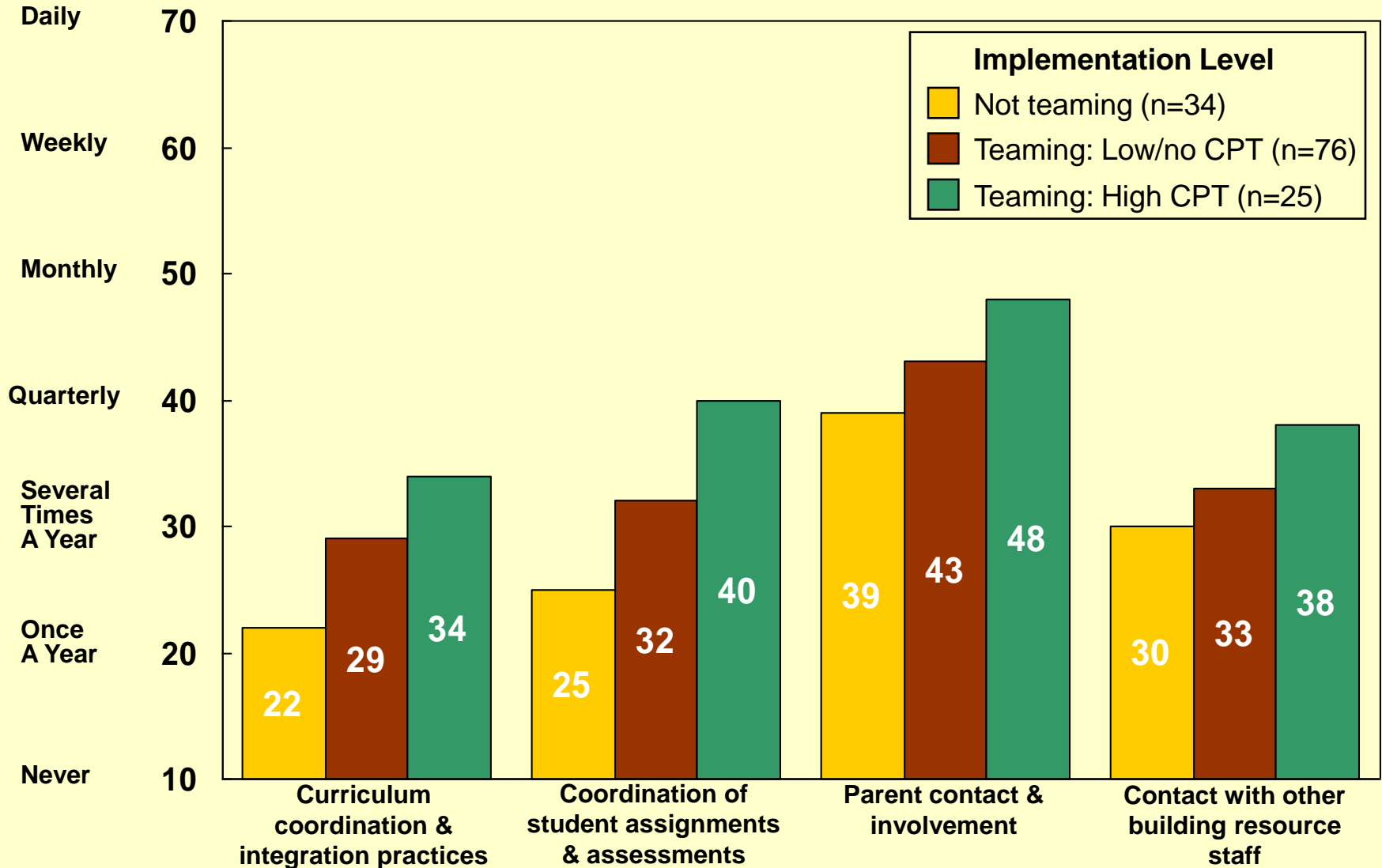
Samples: Survey and achievement data from hundreds of middle grade schools in several states

(AR, IL, LA, MA, MI, MS)

Results: Implementation of middle school reform elements impacts student learning and achievement

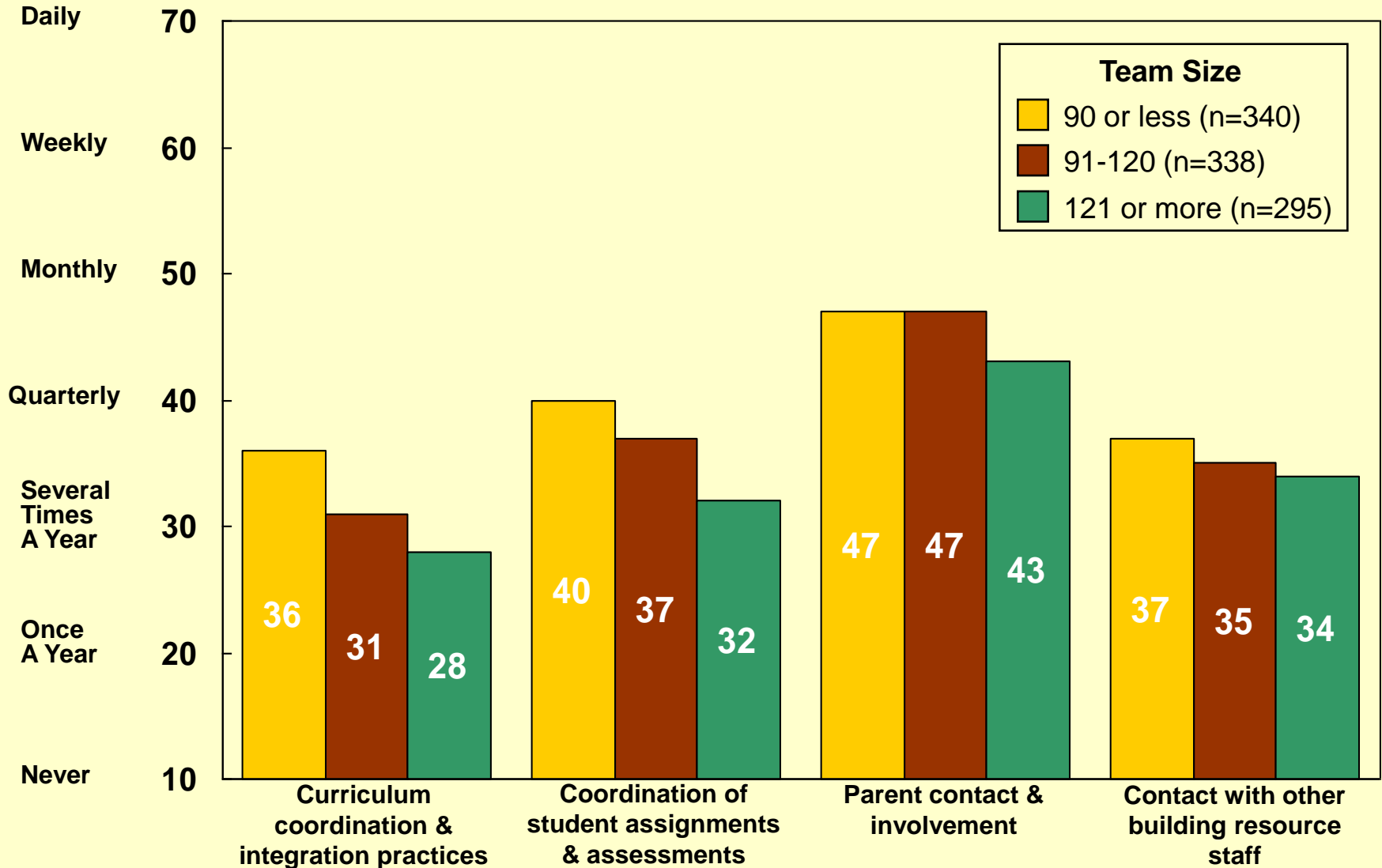
- ▶ Achievement scores are higher for students in schools that are teaming with high common planning time
- ▶ Team size and length of time teaming also affect student achievement scores
- ▶ Teachers with middle-grades certification engage more frequently in “best practices” which impacts achievement

1996/97 Michigan Middle Start: Team Practices by Implementation¹

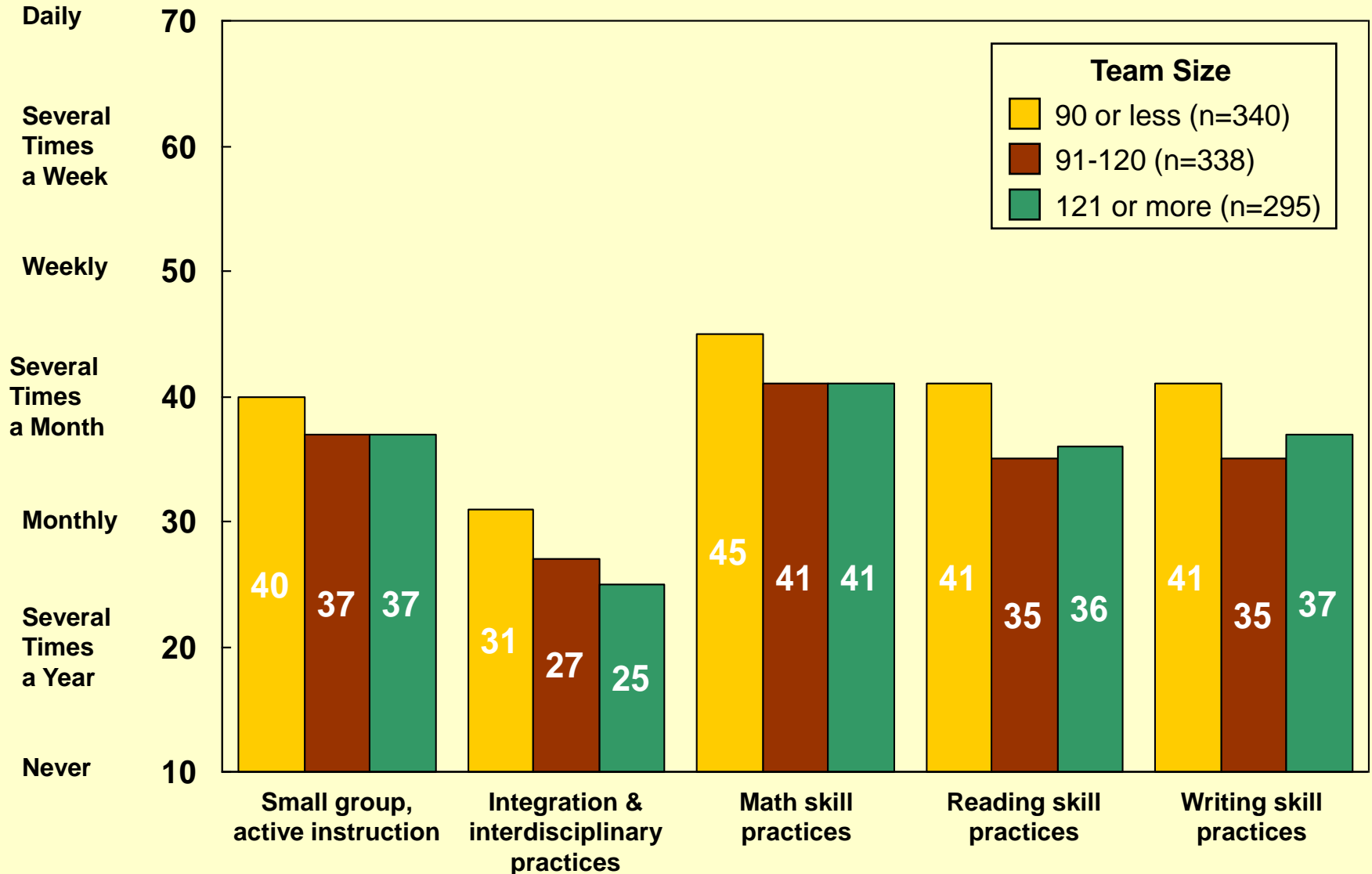


¹ Mean scores significant at $p < .001$

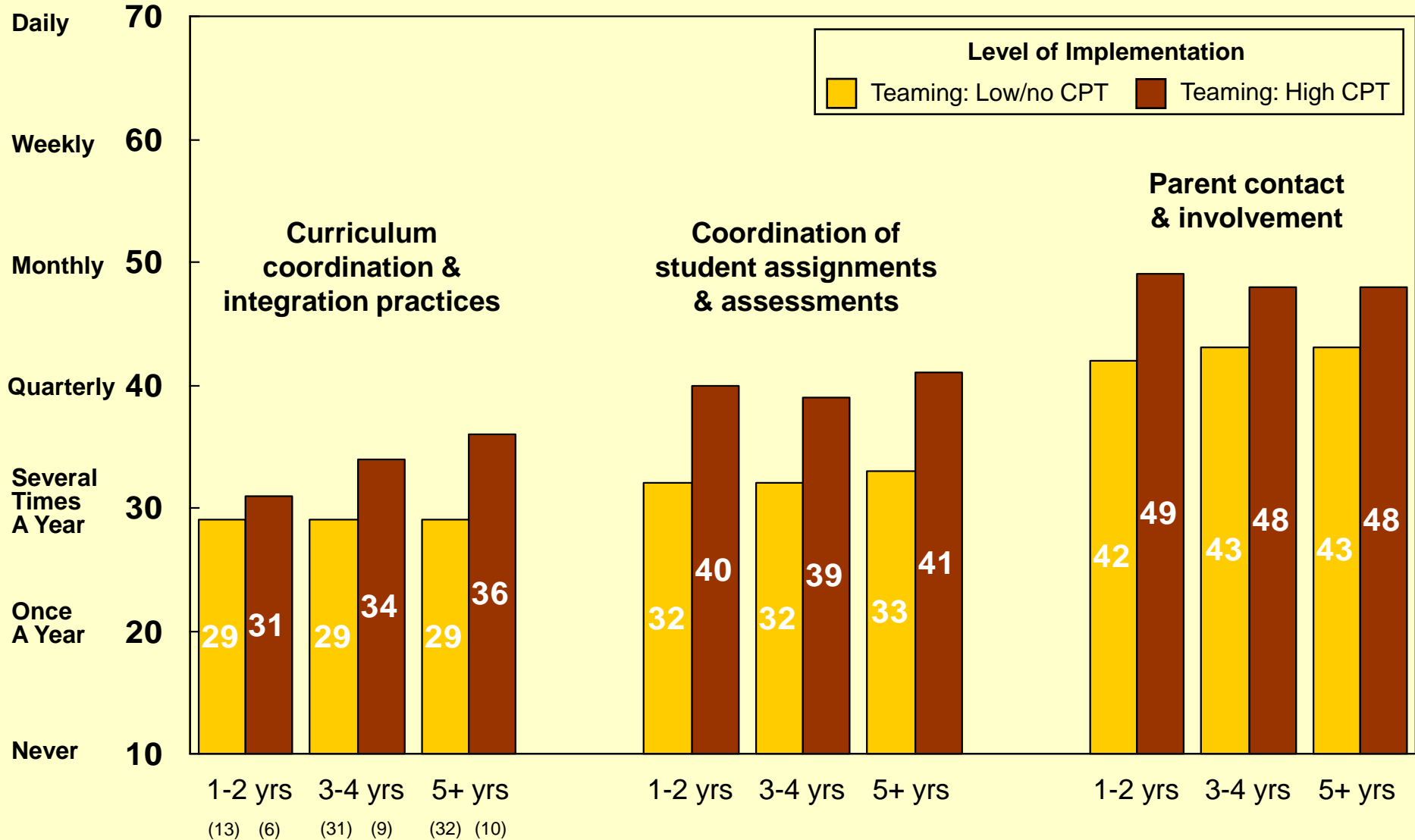
1996/97 Michigan Middle Start: Team Practices by Team Size



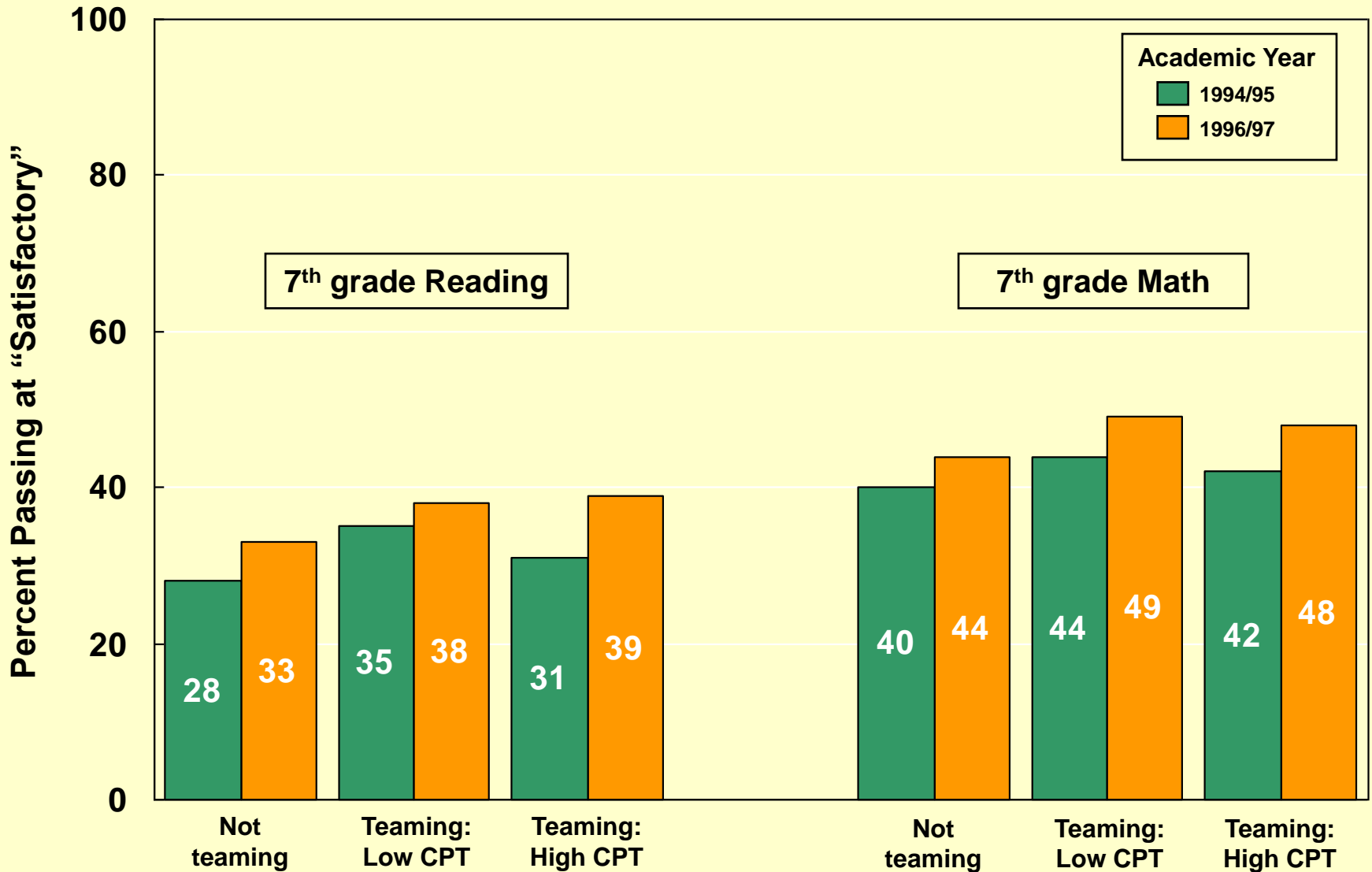
1996/97 Michigan Middle Start: Classroom Practices by Team Size



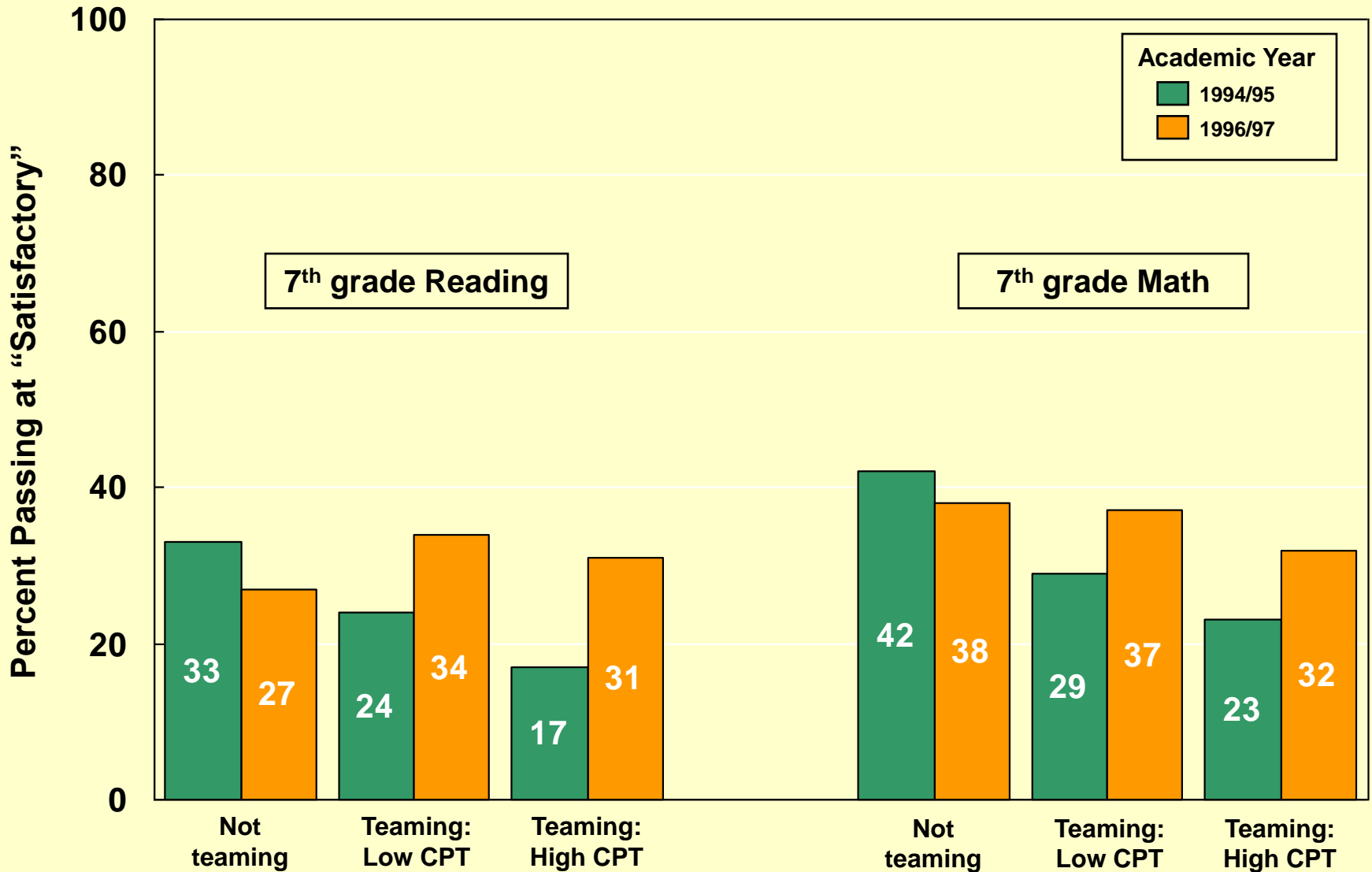
1996/97 Michigan Middle Start: Team Practices by Years Teaming and LOI



Michigan (MEAP) Student Achievement Scores by Level of Implementation

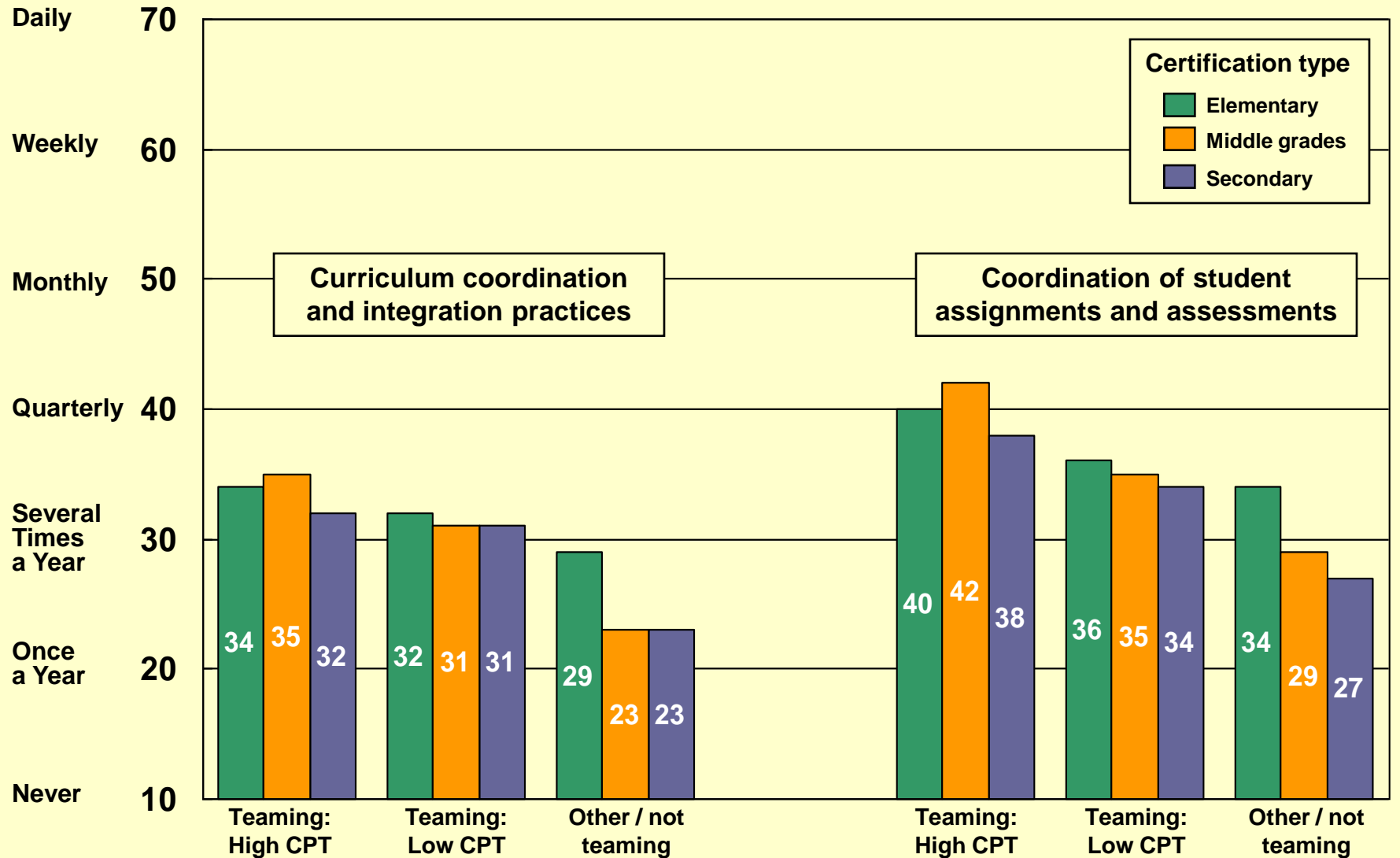


Michigan (MEAP) Student Achievement Scores by Level of Implementation – Grant Schools¹

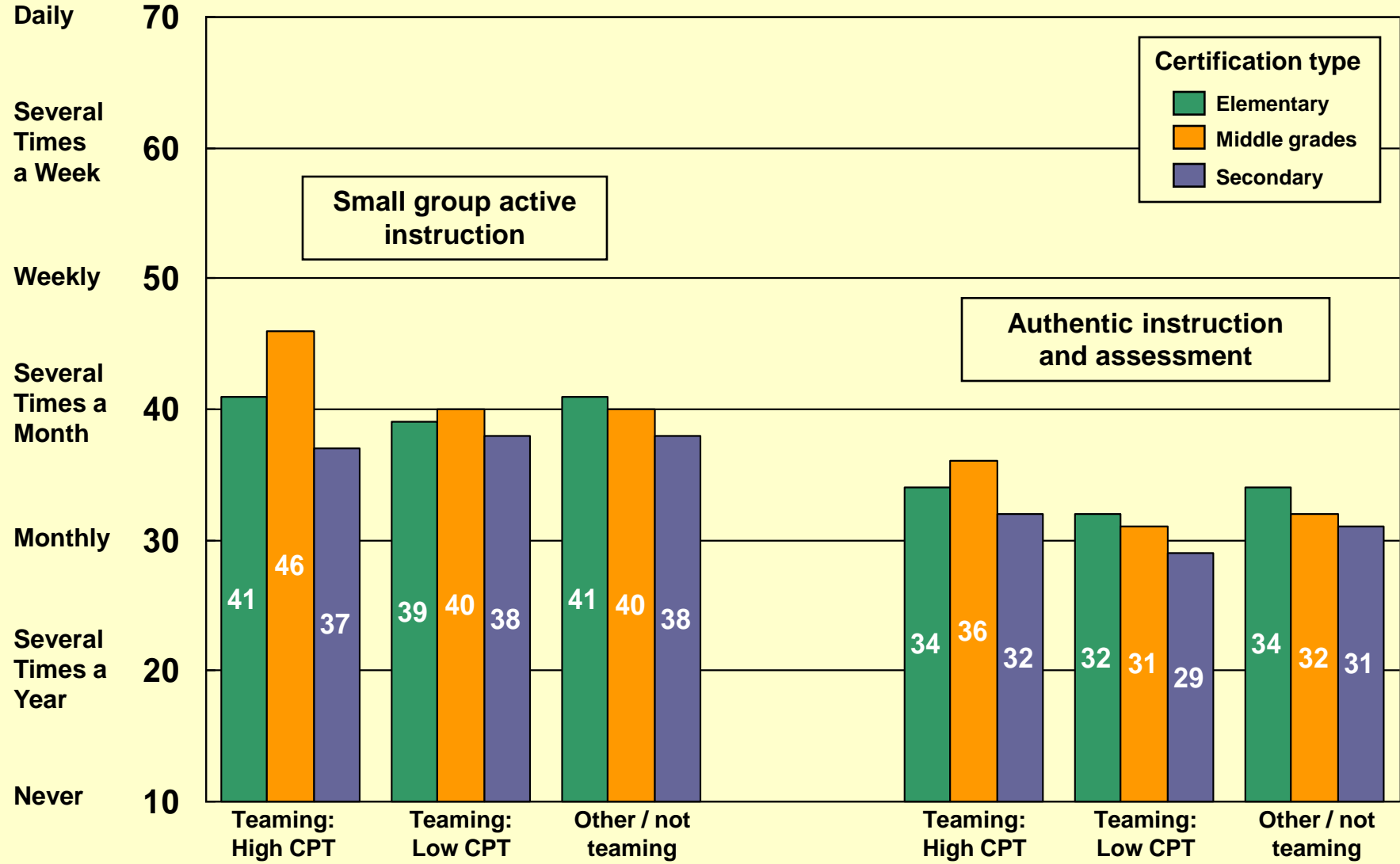


¹ Grant schools denotes a group of 18 Michigan schools that received grants from the W. K. Kellogg Foundation in 1996. These schools all had over 40% free/reduced lunch students.

2000/01 Michigan Middle Start: Team Practices by Certification and Implementation

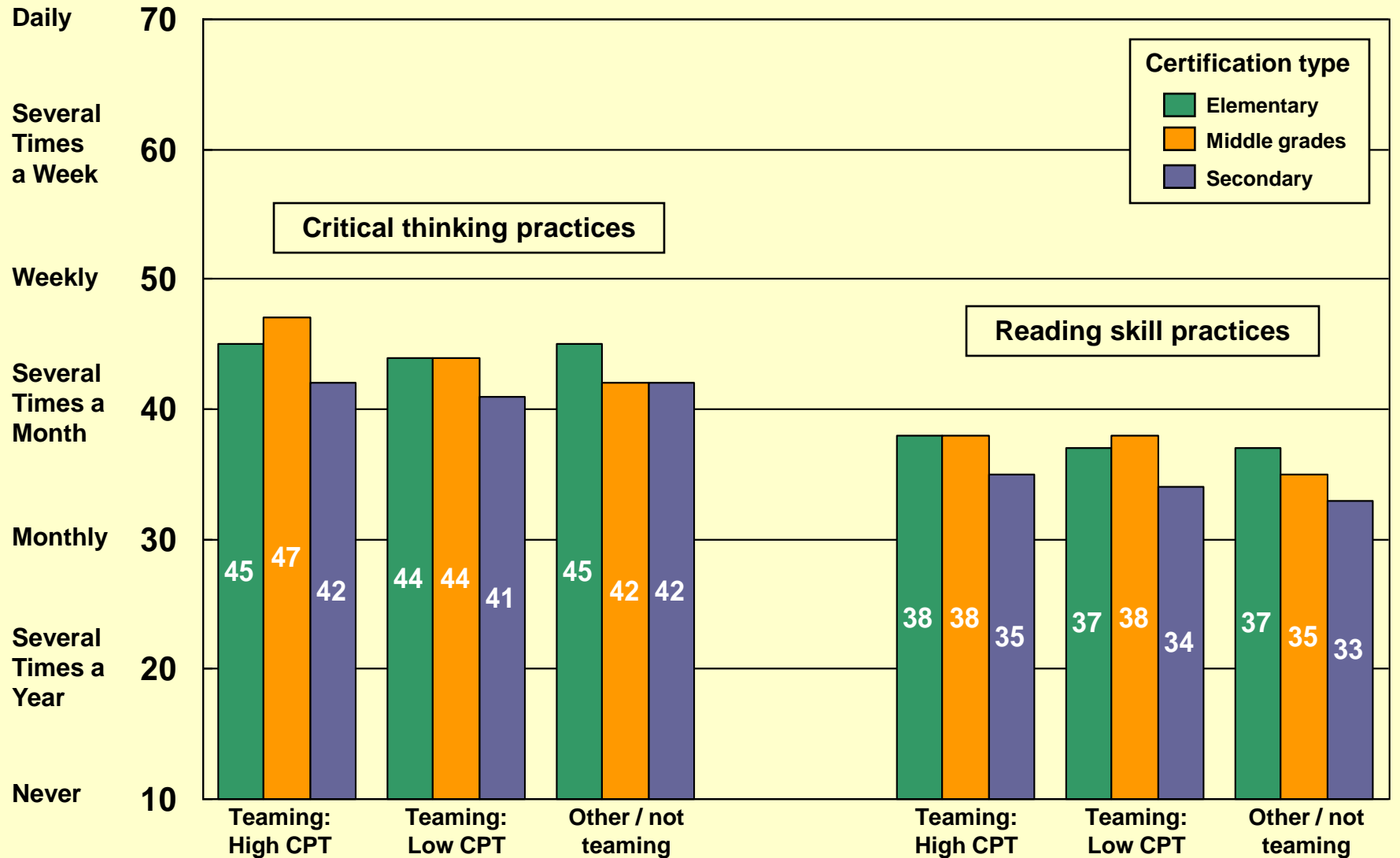


2000/01 Michigan Middle Start: Classroom Practices by Certification & Implementation (1)

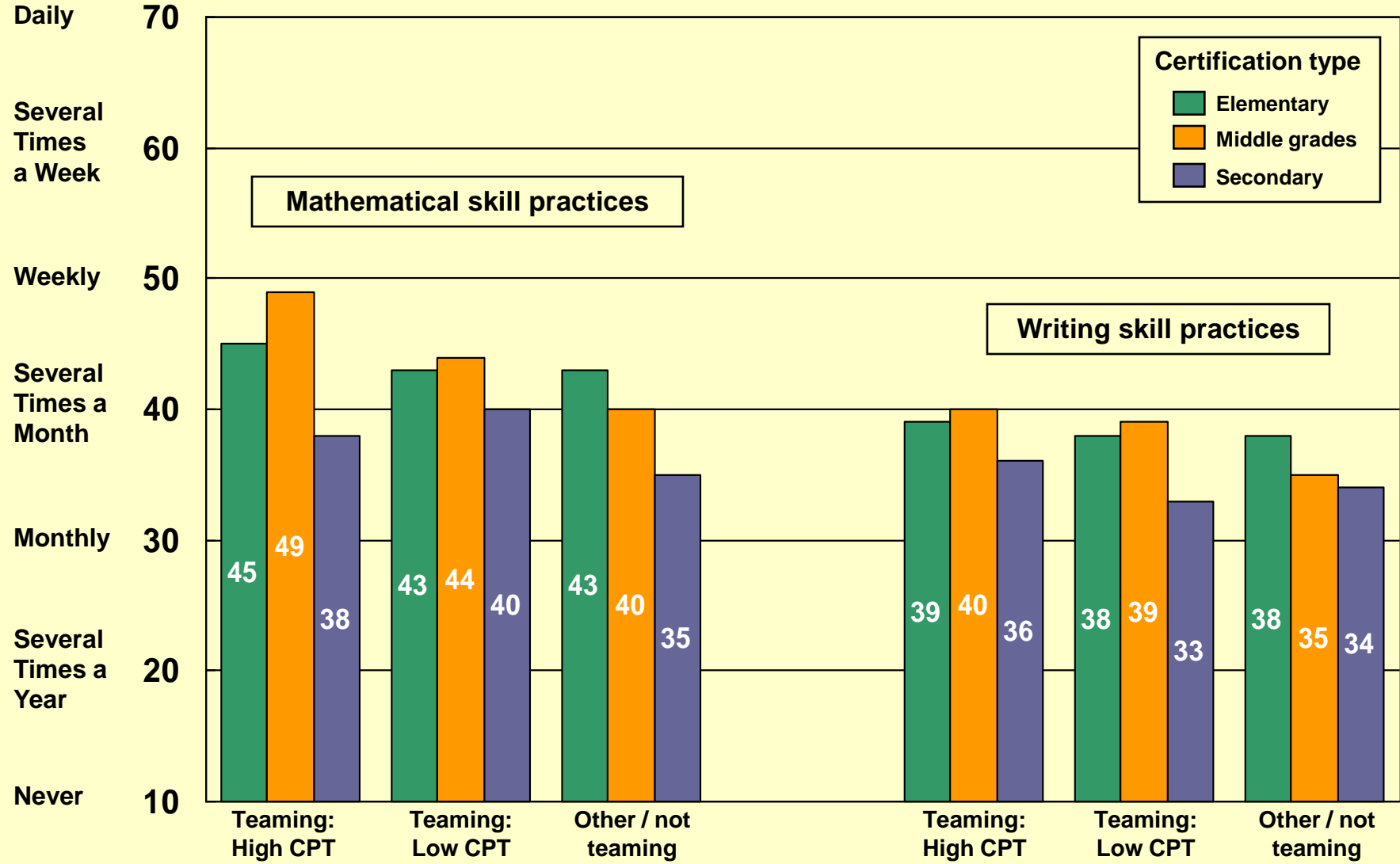


2000/01 Michigan Middle Start:

Classroom Practices by Certification & Implementation (2)



2000/01 Michigan Middle Start: Classroom Practices by Certification & Implementation (3)





Other Studies

- ▶ Backes, Ralston, & Ingwalson (1999) examined impact of middle school practices on student achievement in 6 BRIDGES schools in North Dakota
 - *Found that most achievement scores were higher in BRIDGES school implementing TP recommendations*
- ▶ Lee & Smith (2000) examined impact of school size on student achievement
 - *Found that students in small schools (<400 students) perform better and teachers have a more positive attitude about responsibility for student learning*
- ▶ Sweetland & Hoy (2000) studied relationship between school characteristics and educational outcomes
 - *Found that teacher empowerment (decision making) was linked to student achievement (reading & math)*



Citations

- Backes, Ralston, & Ingwalson (1999). Middle level reform: The impact on student achievement. *Research in Middle Level Education Quarterly*, 22(3), 43-57.
- CPRD publications available at www.cprd.uiuc.edu
- Felner, Jackson, Kasak, Mulhall, Brand, & Flowers (1997). The impact of school reform for the middle years: Longitudinal study of a network engaged in Turning Points-based comprehensive school transformation. *Phi Delta Kappan*, 78(7), 528-532, 541-550.
- Lee & Smith (1993). Effects of school restructuring on achievement and engagement of middle-grade students. *Sociology of Education*, 66, 164-187.
- Lee, Smith, Perry, & Smylie (1999). *Social support, academic press, and student achievement: A view from the middle grades in Chicago*. Chicago: Consortium on Chicago School Research, University of Chicago.
- Lee & Smith (2000). School size in Chicago elementary schools: Effects on teachers' attitudes and students' achievement. *American Educational Research Journal*, 37(1), 3-31.
- Sweetland & Hoy (2000). School characteristics and educational outcomes: Toward an organization model of student achievement in middle schools. *Educational Administration Quarterly*, 36(5), 703-729.