

# SESRC

SOCIAL & ECONOMIC SCIENCES RESEARCH CENTER  
PUGET SOUND DIVISION  
OLYMPIA, WASHINGTON

## Mathematics Instructional Coaching: Interim Report

By: *SESRC – Puget Sound Division*  
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September 2008

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The Social and Economic Sciences Research Center (SESRC) at Washington State University is a recognized leader in the development and conduct of survey research.

SESRC-Puget Sound Division provides technical services and consultation to assist clients in acquiring data, understanding what data means, and applying that information to solving problems. The SESRC Puget Sound Division specializes in research design, data collection and analysis, using both qualitative and quantitative methods. The Division also provides interpretive reports, policy studies, presentations and consulting services directly to individual clients, organizations and consortia.

### ***Acknowledgements***

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# EXECUTIVE SUMMARY

## Mathematics Instructional Coaching: Interim Report

**By: Kyra Kester and Candiya Mann**  
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**Washington State University**  
**September 15, 2008**

Washington has been officially engaged in education reform since 1993 when the state adopted learning goals intended to equip students with stronger academic foundations, who could demonstrate their knowledge, and who were prepared for life after high school. Since then, the schools have relied upon state academic standards that defined the skills students needed to know and demonstrate. Those standards have influenced classroom instruction while state-administered tests demonstrated the growth of student achievement.

Although not mandated to do so, Washington educators have also come to rely upon standards-based curriculum. And they have sought new instructional strategies to help all students master the standards.

To support this work, the state has invested in professional development driven by the standards. Recently – and increasingly – districts have sought to create integrated professional development agendas that addressed the broad array of requirements: targeted training for particular issues, students, and standards. Increasingly balancing the need for professional development with the constraints of local district budgets has made professional development that is delivered locally highly appealing.

Those needs, together with research that demonstrates that teachers – just like students – benefit most from relevant, personalized instruction, led the state to implement instructional coaching as a pilot project. In 2007, the legislature provided funding to support 25 secondary mathematics instructional coaches in 2007-2008 and 2008-2009 (and 25 secondary science instructional coaches in 2008-2009).

The legislature also assigned the Social and Economic Sciences Research Center of Washington State University (SESRC) to “conduct an evaluation of the mathematics and science instructional coach program as described in Second Substitute House Bill No. 1906 (improving mathematics and science education).” Specifically, the assignment required:

- An evaluation of the coach development institute, coaching support seminars, and other coach support activities, including a consideration of best practices from the “thinking mathematically” literature;
- Recommendations regarding the characteristics required of coaches;
- Identification of changes in teacher instruction related to coaching activities;
- Identification of the satisfaction level with coaching activities as experienced by classroom teachers and administrators.

SESRC was instructed to provide an interim report by November 1, 2008, and a final report by December 1, 2009. Science coaching is being implemented in the current year and will be addressed in the final report.

## **THE INTERIM REPORT**

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This interim report provides an assessment of the first year of professional development and an evaluation of the coaching initiative during 2007-2008, with input from the coaches, their administrators, and the teachers they coached.

## **INTERIM FINDINGS**

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- There is no written guidance to districts about the type or amount of work coaches should be assigned. Lacking that, SESRC found a wide variance in the number of teachers, buildings and grades for which coaches were responsible.
- There was also a wide variation in how coaches felt about their first year as mathematics instructional coaches. We did not determine any consistent correlation between the variables in their assignments and their satisfaction.
- The mathematics instructional coaching program received positive evaluations from administrators and teachers.
  - 88 percent of administrators rated the program “excellent” or “good”;
  - 90 percent of the administrators thought the coaching program had contributed to student learning in their district.
  - 68 percent of the teachers who were coached rated the program “excellent” or “good”.
  - 60 percent of the teachers reported that coaching had improved their teaching.
  - 58 percent of the teachers said coaching had changed their classrooms.
  - 88 percent of the teachers wanted at least the same or even more time with their coach in 2008-2009.
- One opportunity OSPI apparently missed was the chance to help guide districts’ selection of an appropriate teacher to become a coach. A more functional description of the duties of a coach could have been useful to school administrators and applicants. It might well have helped some districts better anticipate the major activities of a coach, which might in turn have improved the districts’ understanding of the supports needed for effective coaching as well as reducing the extraneous assignments several coaches reported. Further, such a description might have increased building administrators’ understanding of their crucial role in the success of coaching.
- More communication between OSPI and districts about the conditions necessary for a strong coaching program might have eliminated another source of friction between several coaches and their administrations: time out of district. In coaching initiatives in other states, programs suffered when the coaches were not sufficiently knowledgeable of the state’s content standards. Washington’s coaches were generally quite familiar with the content standards for mathematics. Some coaches were so well versed that they served on the mathematics standards revision workgroups during the year. Some of their districts, however, considered the time away from their assigned schools detrimental to the

developing coaching program. It could be that the combination of ten days of professional development and the standards work negatively affected some coaches' opportunity to build strong relationships with their teachers.

## **NEXT STEPS**

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During 2008-2009 SESRC will:

- Conduct an end-of-year survey with the continuing mathematics instructional coaches, their administrators and the teachers they coach;
- Conduct an end-of-year survey with the new science instructional coaches, their administrators and the teachers they coach;
- Further investigate possible correlations between coaches' background characteristics, elements of their coaching assignments, and positive satisfaction of the teachers; and
- Investigate the effects of instructional coaching on student performance.

## SECTION ONE: INTRODUCTION

Washington has been officially engaged in education reform since 1993 when the state adopted learning goals intended to equip students with stronger academic foundations, who could demonstrate their knowledge, and who were prepared for life after high school. Since then, the schools have relied upon state academic standards that defined the skills students needed to know and demonstrate. Those standards have influenced classroom instruction while state-administered tests demonstrated the growth of student achievement.

Although not mandated to do so, Washington educators have also come to rely upon standards-based curricula. And they have sought new instructional strategies to help all students master the standards.

To support this work, the state has invested in professional development driven by the standards. Recently – and increasingly – districts have sought to create integrated professional development agendas that addressed the broad array of requirements: using training targeted for particular issues, students, and standards. Increasingly balancing the need for professional development with the constraints of local district budgets has made professional development that is delivered locally highly appealing.

Those needs, together with research that demonstrates that teachers – just like students – benefit most from relevant, personalized instruction, led the state to implement instructional coaching as a pilot project. In 2007, the legislature provided funding to support 25 secondary mathematics instructional coaches in 2007-2008 and 2008-2009 (and 25 secondary science instructional coaches in 2008-2009).

The legislation that created the program specified both characteristics to be considered by the district in the selection of the coaches by the district and the activities coaching should include. (These are identified more fully in the relevant discussions below.)

### **THE ASSIGNMENT**

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In 2007 the Washington state legislature assigned the Social and Economic Sciences Research Center, Washington State University (SESRC) to “conduct an evaluation of the mathematics and science instructional coach program as described in Second Substitute House Bill No. 1906 (improving mathematics and science education).” Specifically, the assignment required:

- An evaluation of the coach development institute, coaching support seminars, and other coach support activities, including a consideration of best practices from the “thinking mathematically” literature;
- Recommendations regarding the characteristics required of coaches;
- Identification of changes in teacher instruction related to coaching activities;
- Identification of the satisfaction level with coaching activities as experienced by classroom teachers and administrators.

SESRC was instructed to provide an interim report by November 1, 2008, and a final report by December 1, 2009.

## **THE INTERIM REPORT: CONTENTS**

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In June 2008, twenty-six state-funded mathematics instructional coaches completed year one of a two-year coaching experience. This interim report focuses on the mathematics coaches' experiences (a) with the professional development delivered by the Office of Superintendent of Public Instruction (OSPI) and (b) in their districts during 2007-2008.

The first year experiences of science coaches and the second-year experiences of mathematics coaches will be included in the Final Report for this project, due December 2009. Broader observations about the effectiveness of coaching, including any detectable effect on student learning, and recommendations for future action will also appear as part of the Final Report.

The interim report is arranged with a brief background on coaching drawn from the national literature, Section Two. Section Three presents an overview of the education and previous experience of the 2007-2008 mathematics coaches. Section Four presents the results of the end-of-year survey of the administrators with whom the coaches worked; of the coaches themselves; and of the teachers they coached. Finally, Section Five summarizes our findings of the most significant aspects of the 2007-2008 program year.

## **METHODOLOGY: YEAR ONE**

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Instructional coaching for mathematics began during the school year 2007-2008. After a competitive application process, the Office of Superintendent of Public Instruction (OSPI) selected twenty-five districts to receive state grants for mathematics coaches. They provided a five-day Summer Institute in August 2007 for those coaches and other mathematics leaders, followed by ten days of additional professional development during the year. Members of the Math Helping Corps, staff from some of the Educational Service Districts, and a few district-funded mathematics coaches attended in addition to the state-funded coaches. The state and locally funded mathematics coaches were the most consistent attendees.

SESRC staff attended each session as observers. The interim report provides the coaches' evaluations as initial analysis of the institute and of the 2007-2008 seminars, although final conclusions about professional development and coach support will not be drawn until the end of the second full year of support.

SESRC conducted a pre-survey of the mathematics coaches in August 2007 at the summer institute. Coaches who joined the program during the year were asked to provide background information as part of the end-of-year survey so that education and experience information is available for all the 2007-2008 coaches. It is presented in Section Four below.

During spring 2008 SESRC also assembled the names and email addresses of the administrators and teachers with whom the state-funded mathematics coaches had worked most closely. During the month of June the coaches, administrators and teachers were invited to participate in an on-line survey asking each group to reflect on their expectations and experiences from the year. The results of the surveys are discussed in Section Five below.

## SECTION TWO: ABOUT COACHING

Instructional coaching has been initiated in projects of varying size around the country, particularly in the last decade. Although the concept remains somewhat variable, it has been noted widely as an emerging and promising practice. The following section summarizes the national discussion. As noted in SSHB1906, coaching “is focused on supporting teachers as they apply knowledge, develop skills, polish techniques, and deepen their understanding of content and instructional practices.

### WHAT IS INSTRUCTIONAL COACHING?

---

*Instructional coaching* or *pedagogical content coaching* is a form of professional development in which an experienced, highly effective teacher serves as a resource for other educators in the same content area. Coaches help other teachers expand their content knowledge and their teaching skills, update and extend their teaching strategies, reflect on student thinking, design effective lessons for all the students in their classes, and use a variety of feedback and assessment data to assess and revise continuously.

In an early model of coaching, teachers coached each other, providing general feedback and encouragement and critiquing their efforts to employ new teaching strategies in their classrooms.<sup>1</sup> In recent years, coaching has more commonly meant a single coach working with multiple teachers. The coach has been an experienced, influential teacher who steps out of the students’ classroom to create a “learning community” with other teachers. In some cases, the coach remains a part-time teacher and is probably seen more as a teacher-leader to his or her peers. Increasingly, the coach is relieved of all direct teaching of students to focus on providing new skills to other teachers and supporting their application of those skills in their classrooms.<sup>2</sup>

Typically, coaches meet regularly with teachers to help create lesson plans and teaching activities (which may be done as group activities); observe classrooms; and meet with teachers to debrief and revise their lessons. In so doing, coaches model the instructional practices they want teachers to employ in their classrooms.

### WHY COACHING?

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While the concept of instructional coaching has multiple roots, it derives chiefly from research that demonstrated the most effective professional development for educators was:

- embedded in their school;
- targeted to the specific needs of their classrooms and students;
- collaborative; and
- inquiry based.<sup>3</sup>

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<sup>1</sup> Showers, B. and Joyce, B. (1982). The coaching of teaching. *Educational Leadership*, 40(1), 4-10; Showers, B., & Joyce, B. (1996). The evolution of peer coaching. *Educational Leadership*, 53(6), 12-16.

<sup>2</sup> Coaching is not mentoring, which is more often used to support new, isolated or stressed teachers to retain those teachers in the profession. Mentoring is more social and may focus more on understanding (and surviving) the culture of a school or district.

<sup>3</sup> E. Miller, “The Old Model of Staff Development Survives in a World Where Everything Else Has Changed,” *The Harvard Education Letter*, XI,1 (January/February 1995), 1-3; L. Darling-Hammond and M. W. McLaughlin, “Policies that Support Professional Development in an Era of Reform,” *Phi Delta Kappan* 76, 8 (1995): 597-604..

Coaching is also based upon research that supports the creation of *professional learning communities*. This term, too, has multiple uses, but for most educators means assembling a group of educators committed to investigating new teaching practices, sharing their knowledge, and acting on what they learn. The goal is enhancement of their own effectiveness to increase students' learning.

## **WHAT HAPPENS?**

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The literature describes a range of activities recommended for coaches. Some focus on the daily tasks of coaching, others more broadly on the function of the coach as part of a school's and district's learning mission.

Generally, a coach is described as:

- providing instruction -- and modeling appropriate instructional techniques in the process;
- leading teacher meetings and facilitating study groups;
- providing their own and facilitating teacher-peers' feedback to teachers;
- leading group evaluation of the evidence of effectiveness and
- instituting continuous improvement procedures.

Together, these activities foster collaboration among educators and create an environment conducive to experimentation. Coaches should provide activities that allow teachers to employ new skills with colleagues as well as students. The process should reinforce methods of combining pedagogy and content considerations in preparation, teaching and evaluation.

Optimally, though, the coach's responsibility should extend beyond daily activities with a few targeted teachers to frame the coach's and the teachers' work within the context of the school's and district's education goals. The work of the coach and the teachers should have clear objectives, measurable targets, and a method of evaluation. To model collaborative leadership, coaches should involve teachers in defining the goals and targets and in establishing how evidence of effectiveness will be gathered and evaluated. Together they should agree to operating principles that will maximize collegiality in the work and establish how they will use their evaluations in a continuous improvement process. Regularly scheduled meeting times provide structure and stability to the work. Many of these tasks can and should involve more educators than the teachers who are being directly coached and the professional learning community should include at least the whole department of the content area.

In more depth, successful coaches lead the learning community to create a framework for their activities by:

- Clearly articulating their goals with defined objectives (measurable outcomes);
- Stating a definite content target (such as math proficiency);
- Agreeing upon operating principles that maximize collegiality;
- Scheduling time to meet and work together;
- Establishing the method for collecting evidence of effectiveness; and
- Specifying the procedures for using the evidence in a continuous improvement process.

Second, successful coaches provide and lead work that fosters a teacher's individual change. Usual activities include:

- Classroom observations by the coach;
- Classroom observations by peers;
- Structured time for group and individual discussion of observations, experiences and further enquiry;
- Variety of approaches to reviewing evidence of student performance;
- A transparent process of continuous learning for the coach.

## **WHO MAKES A GOOD COACH?**

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The most successful coach will be the one who is the best model of the behavior being encouraged in teachers. Successful coaches instruct by example and by facilitating growth in the professional learning community. Valuable knowledge and skills include:

- Deep knowledge of the content area;
- Understanding of the district and school improvement goals, current student performance and student improvement goals;
- Knowledge of best practice in adult learning;
- Strong interpersonal and communication skills,
  - Including value of consistency and accessibility.<sup>4</sup>

While the importance of interpersonal skills is regularly observed in the literature about coaching, and particularly in the evaluative literature, it is a thorny implementation issue. Districts may not find themselves perfectly free to select candidates based on these qualities or may not candidate who bring evidence of the skills. That may mean that assessing these skills must become a regular part of evaluating a coach's effectiveness as a critical part of the continuous improvement process for the coaching program.

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<sup>4</sup> B. Neufeld and D. Roper, *Coaching: A Strategy for Developing Instructional Capacity—Promises and Practicalities*. Washington, DC: Aspen Institute, Annenberg Institute of School Reform, 2003; Susan M. Poglinco et al., *The Heart of the Matter: The Coaching Model in America's Choice Schools*. Philadelphia: University of Pennsylvania Graduate School of Education, Consortium for Policy Research in Education, 2003.

## WHAT MAKES A COACHING PROGRAM SUCCESSFUL?

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The 2003 evaluation of coaching in America's Choice schools identified crucial ingredients for success.<sup>5</sup> Among them were the interpersonal skills of the coach and the perceived support of building leadership.

In fact, teachers have been quite clear about what makes a good coach:

- Accessibility: teachers need time with the coach;
- Content focus:
  - Coaching focused on content encourages the use of data for continuous improvement.
  - Areas of demonstrated need, such as achievement gaps, can be targeted directly.
  - Differentiated instruction can be designed, applied and evaluated effectively.<sup>6</sup>
- Coaching can support teacher development and career progression
- Timely and relevant information: Teachers wanted a sequencing of new information that best fits their lessons so that it could be employed and reviewed before moving on to the next concept;
- Inclusive approach: Not surprisingly, teachers who felt the coach valued their participation in the planning and conduct of the program were most satisfied;
- Flexibility and innovation: Teachers appreciated a coach who understood the differences among classes and between envisioned classrooms and their real students.

Also deemed helpful by teachers, coaches and administrators were:

- Personal experience in the building: Some participants thought the introduction of a coach with whom staff were not already familiar added to the coach's challenges. (On the other hand, some coaches confronted former peers who resented the coach's new position.)
- Experience with adult learners: Some experience as administrator, supervisor or as an instructor of adults seemed to help coaches anticipate the needs of adult learners;
- Solid understanding by the teachers of the goals of coaching;
- Support from building and district leaders: The evaluators particularly stressed the importance of the attitude and actions of the school principal, noting that it was necessary both to support both the coach as an individual and the coaching program. "The amount and type of support provided by the principal appeared to be a critical (factor in) . . . coach effectiveness."<sup>7</sup>

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<sup>5</sup> Heart of the Matter, *op cit*.

<sup>6</sup> K. Barr, B. Simmons, and J. Zarrow, School Coaching in Context: A Case Study in Capacity Building, Paper delivered American Educational Research Association, Chicago, IL (April 2003), accessed on line at [http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/1b/59/01.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1b/59/01.pdf)

<sup>7</sup> Heart of the Matter, p. 39.

## **SECTION THREE: CHARACTERISTICS OF THE 2007-2008 MATHEMATICS COACHES**

### **EXPECTATION**

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The legislation creating the mathematics instructional coaching program stipulated the characteristics districts should consider when selecting a coach:

- expertise in the content area;
- expertise in the instructional methodologies and in personalized learning;
- personal skills that include skilled listening, questioning, building trust and solving problems;
- understanding and addressing the differences between adult and student learners; and
- the capacity for strategic planning and quality program implementation.

### **SELECTION OF COACHES**

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During July and August 2007, OSPI conducted an online application process for districts seeking to create or expand mathematics coaching in their secondary schools. OSPI requested that districts identify the individual they considered their coaching candidate, but scored the candidate nomination section for “a clear and thorough introduction and background”, not necessarily for the specific experience of the nominee. Additionally, several districts made changes after the awarding of the grants; some made changes during the year and others at the end of the school year.

OSPI selected 25 districts to receive grants (see Appendix for grantee list). One district split its funds to support two coaches, each of which attended the August Institute and year-long professional development. Others may have used district funding to complement the state grant because more than one coach regularly attended professional development as well.

### **BACKGROUND AND EXPERIENCE OF THE 2007 – 2008 MATHEMATICS COACHES**

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The following reflects the characteristics of 25 of the 26 state-funded coaches in place at the end of the school year 2007-2008. (One position is split among two half-time coaches, both of whom were included in the survey. One state-funded coach did not participate.)

**Figure 1: Experience and Training as a Coach**

Previous training as a mathematics coach	7 (from 5 different sources)
Previous training as a coach in subject other than mathematics	1
Previously served as a mathematics coach	9 1 – 2 years . . . . . 6 More than 2 years. . . . 3
Coached in a subject other than mathematics	2
Had a coach	8

**Figure 2: Educational Background**

Secondary education endorsement	17
Elementary certification	10 with a mathematics minor . . . . 1
Baccalaureate degree in mathematics	10
Advanced degree in mathematics	4
Advanced degree in mathematics pedagogy	4

**Figure 3: Teaching Experience**

1 – 3 years of experience	1
4 – 6 years of experience	2
7 or more years of experience	23

**Figure 4: Levels Taught Previously**

Primary grades	4
Middle school/Junior high	19
High School	12
College (all)	5 Baccalaureate. . . . 3

## SECTION FOUR: END OF YEAR OBSERVATIONS

### 2007-2008 SURVEY

To identify the experiences of the mathematics instructional coaches and measure their satisfaction with the professional development provided for 2007-2008, SESRC invited 28 mathematics instructional coaches from 26 districts to participate in an on-line survey in June 2008. (Although the state funded 25 districts with grants, other districts funded their own coaches. Those who sent their coaches to participate regularly in the 2007-2008 professional development were invited to participate in the survey. Additionally, some state-funded districts sent more than one coach, some of whom responded to the survey while others did not. (In two districts, two coaches each completed surveys. In a third district, only one coach survey was completed for the district.) One state-funded coach did not complete the survey. In all, 26 coaches responded, providing a response rate of 93 percent overall and 96 percent of the state-funded coaches.

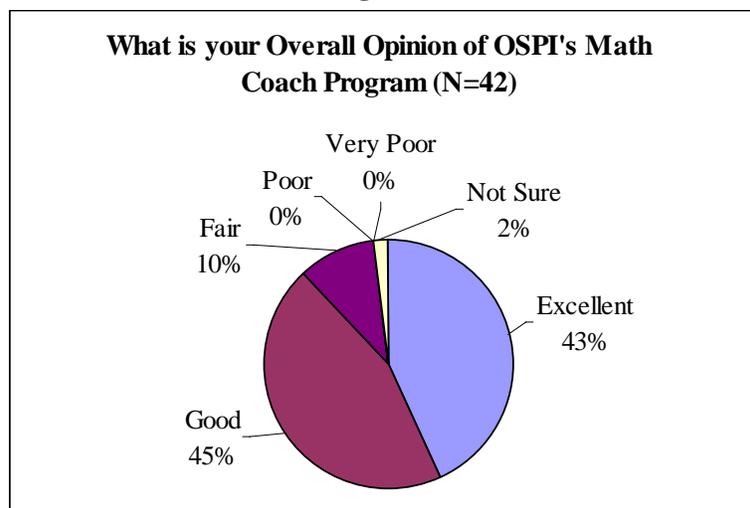
SESRC asked these coaches to identify the administrators with whom they worked and the teachers they had coached. SESRC then invited the 58 administrators and 243 teachers they identified to participate in a similar survey. Forty-four administrators (76 percent response rate) and 157 teachers (65 percent response rate) participated. All invited districts are represented in the survey (including the district of the state funded coach who did not complete the survey).

In May and June 2008, SESRC administered three separate surveys – one each for administrators, coaches and teachers -- all accessible on-line. They were asked to complete the process by the end of June 2008, a date by which the school year had ended for all districts. (The survey opened during the last week of school for the earliest closing districts.) Thus all those surveyed were able to complete the survey at the end of the school year.

### WHAT THE ADMINISTRATORS SAID

The administrators who were surveyed expressed strong support for mathematics instructional coaching. Figure 5 below illustrates that 88 percent of the administrators gave the mathematics coaching program a positive rating. None gave it a poor rating.

Figure 5



When asked to identify what they thought were the most successful elements of the program, those named most often were that:

- The coaches were able to work with teachers on regular basis, provide attention and support (10 responses)
- Coaches supported staff working together to align curriculum, instruction and assessment (4 responses)
- The coach could coordinate mathematics among the districts buildings and grades (4 responses)
- A coach could coordinate the district's mathematics improvement efforts (3 responses)
- Coaching resulted in teachers adopting more effective teaching practices (3 responses), and
- Coaching improved teacher collaboration (3 responses)

Administrators also mentioned the importance of having someone to work with new teachers, while one noted that the coach focused on applications that could bridge mathematics and science.

When asked what they perceived to be the coaches' chief challenges in 2007-2008, administrators replied:

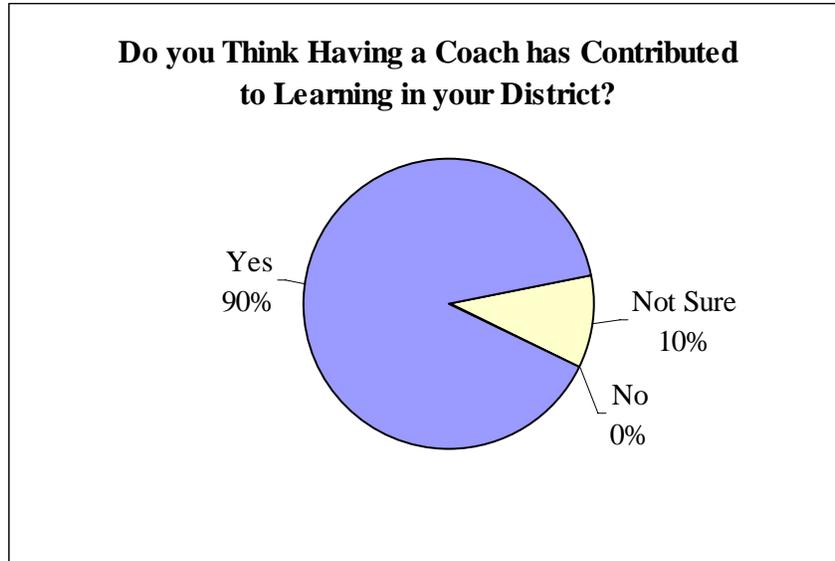
- Teacher resistance or teachers who did not understand the purpose of coaching (9 responses)
  - One noted that school boards and other stakeholders did not understand coaching either
- The coaches were spread too thin with too many other tasks (8)
  - Several administrators noted, however, that those were all tasks for which they also needed help and that must be done
- Finding a coach, and particularly finding the right one for that school (3)
- Funding, affording a full-time coach, affording sustainability (3)
- Off-site training of the coaches took them away from the school (2)
- Scheduling (2)
  - This referred to finding the time for coach and teachers to meet
- The changing target of new assessments and standards (2)

Individual administrators also noted the challenges of

- Defining the role of a coach
- The loss of a master teacher from the classroom
- Trying to coach those who were formerly colleagues
- The work of tailoring their support to each teacher's needs
- Not knowing exactly what works for teaching mathematics as well as we now do for reading and writing

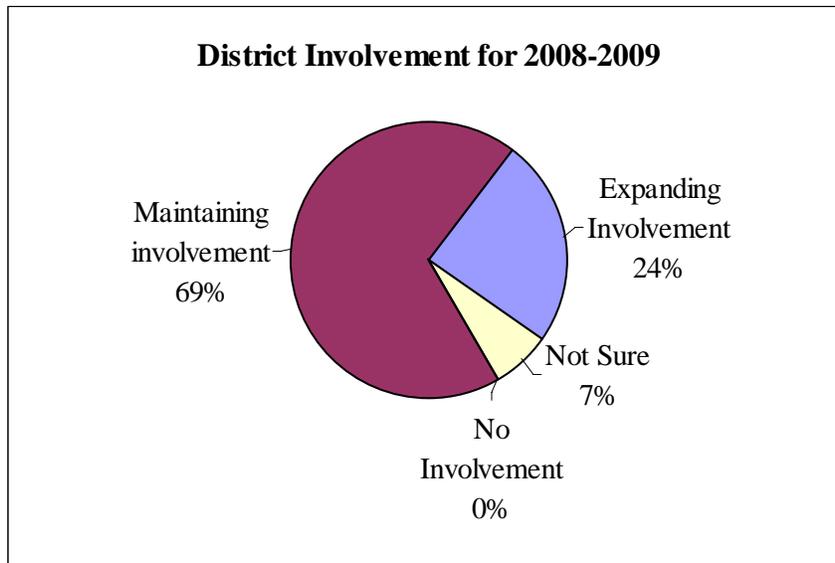
Despite all these challenges, when asked if they thought the coach had contributed to learning in their district, their support was extremely strong, as shown in Figure 6, below.

**Figure 6**



Continuing their strong support for coaching, 93 percent of administrators reported that their districts were continuing or even expanding coaching for 2008-2009, as show in Figure 7 below.

**Figure 7**

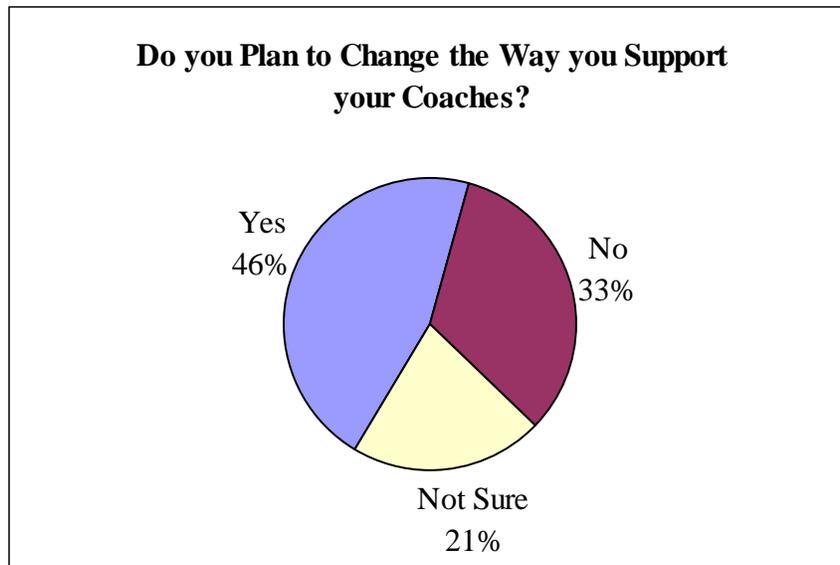


Some administrators who said they would be expanding the coaching program reported they would be doing so by adding a district-funded coach or expanding coaching into more buildings. Others expected to “provide training for more staff”, likely meaning that more teachers would be involved

in the on-site professional development delivered by coaches. Still others planned to expand the coach's direct involvement with teachers. The plans of other administrators might be better expressed as expanding their expectations for coaching. Those plans included having the coach develop a five-year mathematics plan and assigning the coach to develop more teacher leaders. One administrator thought expansion would happen by giving the coach "clearer directions."

Figure 8 illustrates administrators' plans for supporting their coaches. Nearly half (46%) expect to change the way they support their coaches in the second year.

**Figure 8**



Specifically, they planned to address the shortcoming they had observed in the past year. They planned to expand stakeholders' understanding and support of the work. Some plan to adjust schedules to maximize the coaches' time with teachers and in classrooms and to support more collaboration. Similarly, administrators sought to help coaches move from "planning to coach to coaching." They also recognized that coaches needed to be focused on improving teaching and less on other tasks. Some administrators had very specific and "hands on" plans. One felt that the coach needed assistance in organizing his or her time while another planned to provide written expectations of the coach. One planned to move the coach from the district office into the school and another to do "walk throughs" and teacher observations with the coach.

### ***Suggestions for OSPI***

When asked what OSPI should do to improve the program, administrators had a variety of suggestions, but the most frequent responses were about funding:

- Continue to fund
- Fund it fully
- Provide full salary support
- Provide summer funding if there is to be summer training
- Give us more time: 2 years is too little
- Give us more coaches

Other suggestions were about clarity of purpose and communication:

- Establish clear parameters for coaching
- Make the coaches duties clear to all administrators
- Include on-site requirements (what coaches should be doing in the schools)
- Have coaches debrief their work
- (It was not clear if this meant locally or to the state)
- Give districts a copy of the training agenda
- Less OSPI-related work that takes the coach away from the building

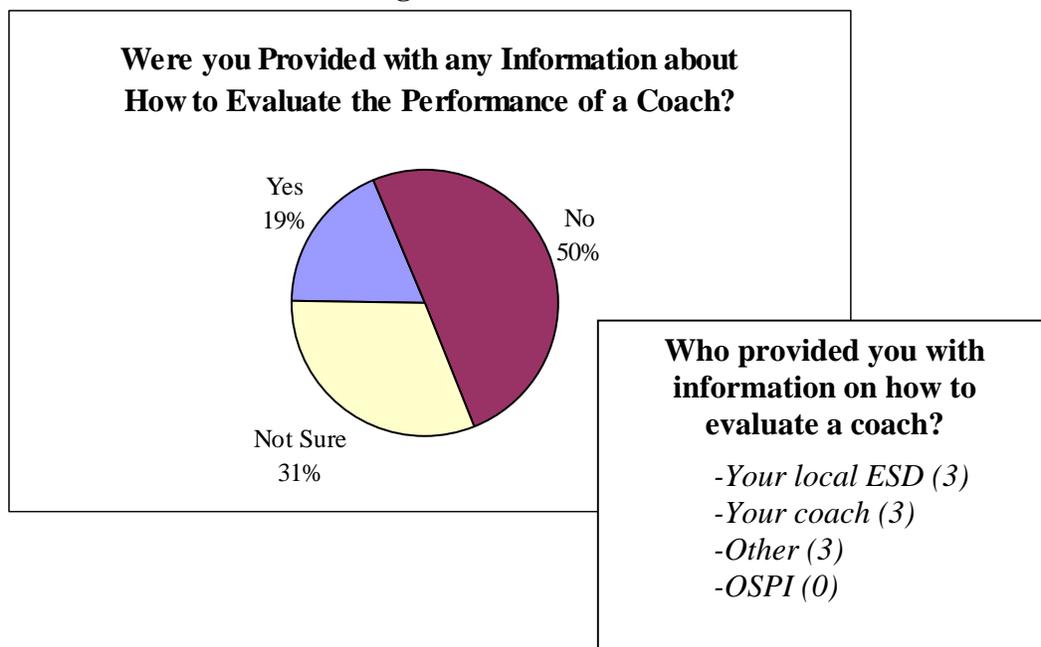
In addition to wanting to understand the professional development schedule and content, administrators also had suggestions about what more it should provide. Some of those suggestions directly addressed coaching, while some were more generally about mathematics leadership:

- Provide more training on how to work with resistant teachers
- Provide national and state summits on best practice
- Improve OSPI directions on standards and curriculum
- Provide common assessments by course and content.

### ***Supervising a Coach***

Perhaps illustrative of the need for more direction from OSPI, when administrators were asked if they had been given information about how to evaluate a coach, 50 percent said they had not, and 31 percent were not sure, as shown in Figure 9. Only 19% replied that they had received that information, but none reported receiving it from OSPI. As seen in Figure 8, administrators are getting information about coaching from a variety of sources.

**Figure 9**



Finally, given the chance for open comments about the coaching initiative, administrators said:

- There needs to be more communication about instructional coaching with building and district administrators.
- There should be statewide adoption of expectations of coaches' instruction.
- We need this for science.
- We need this for building administrators.
- This did not cause score changes for us, which was disappointing. This is a thorny issue.
- Give the program more time.
- It's been a learning year for us.
- This is a great way to embed professional development.
- Continue the excellent support for coaches.
- This is an invaluable resource, especially for small districts (3 responses)
- This has been very successful; continue it; we need the help; we had a great coach (9).

## WHAT THE COACHES SAID

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### *Assessing the Professional Development*

Our first questions for the coaches were about the professional development they had received during 2007 – 2008, which has been described in Section Three of this report. These are the coaches' assessments, illustrated in Figure 10 below.

**Figure 10**

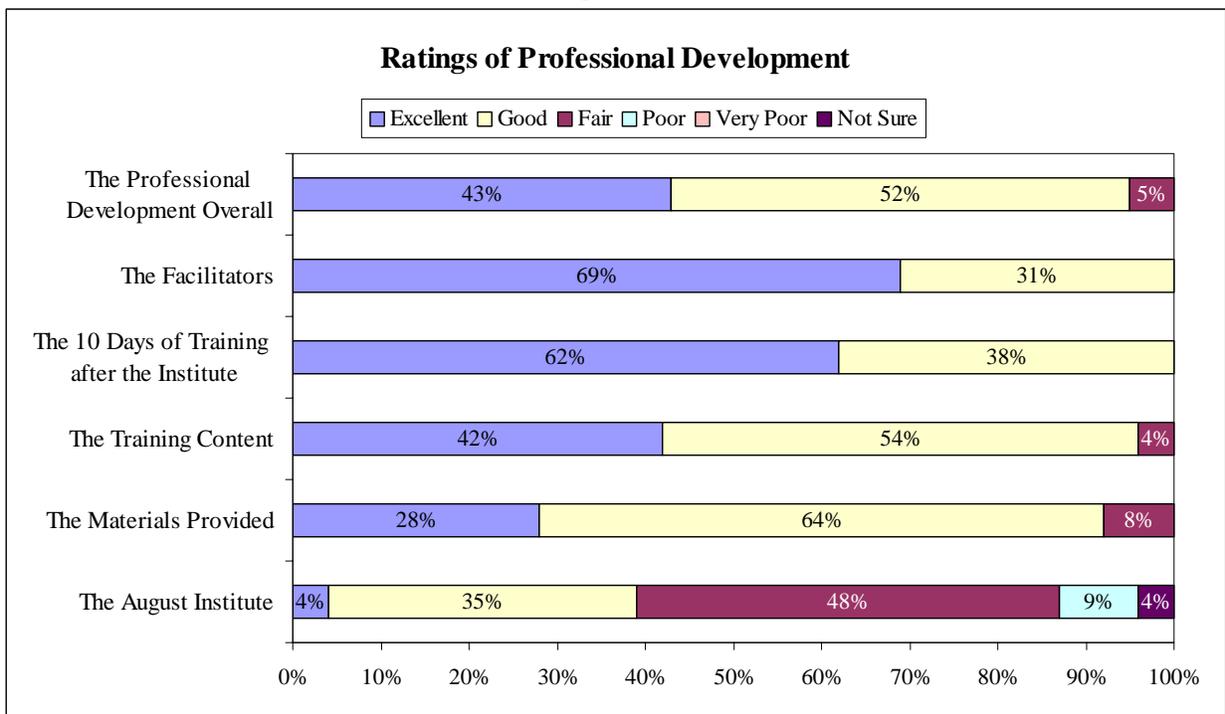
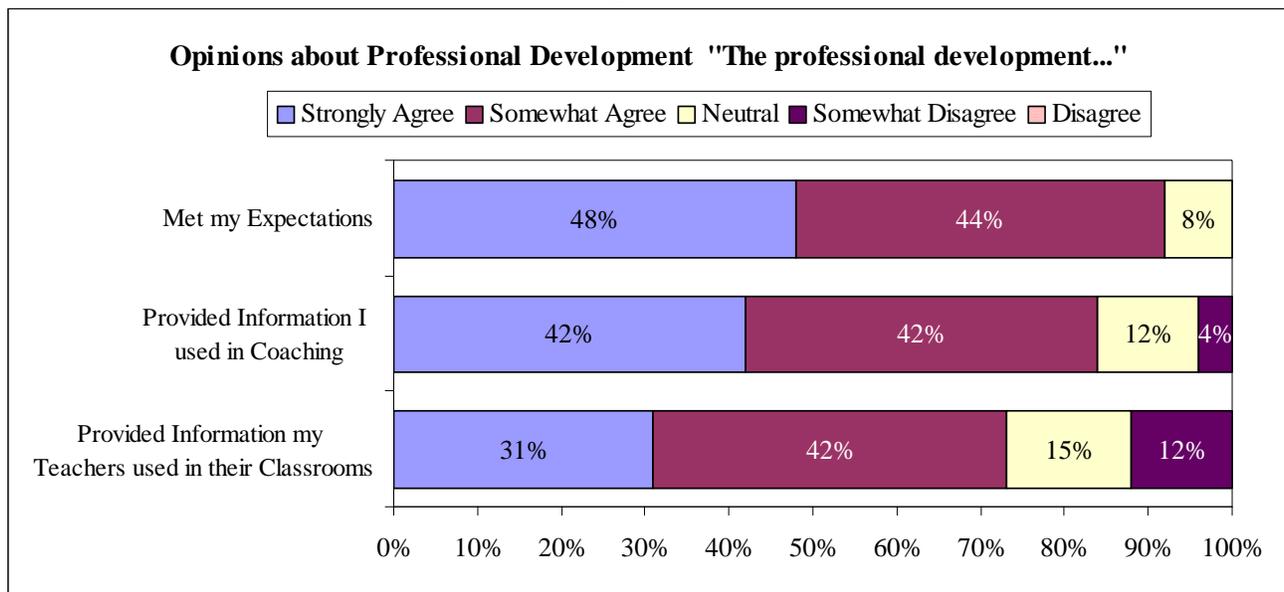


Figure 10 above shows notable support for the professional development generally, although the lowest rated component was the August Institute.

- The professional development overall was rated positively by 95 percent of the respondents, with only 5 percent rating it “fair.”
- The ten days of professional development provided during the school year and the training facilitators were particularly highly rated, with 100 percent responding “excellent” or “good.”
- Training content and materials both received approval from over 90 percent of the respondents, although 4 percent rated the content of the training as only “fair” and 8 percent rated the materials they received as only “fair.”
- The August Institute was the only element to receive any “poor” (9 percent) or “not sure” (4 percent) ratings.

When asked whether the professional development met their expectations and proved useful to them, the responses remained generally positive, as figure 11 below demonstrates.

**Figure 11**



Coaches were next asked to comment on the elements of the professional development they found most valuable. Their responses included:

- Networking (11 responses)
- Practicing coaching skills (7)
- Content and materials from the trainings (4)
- The facilitator (3)
- Videos of coaches at work
- The advice to keep our expectations reasonable

Coaches were also asked to identify the least valuable part of the training. Naturally, there were contradictions with different coaches preferring and disliking the same things. The coaches reported as least valuable:

- The August Institute itself and/or
- The August instituted and the other trainings seemed out of sequence (9 responses)
- Not addressing all grades; too many high school-level content examples (5)
- Three-day sessions are too long (3)
- The Bay area information (it was too different from what we're doing) (3)
- Going through the rationale (I'm already convinced)
- Role playing

Coaches were then asked how the professional development could be improved. They suggested:

- More networking time (3)
- More group time (2)
- Make the work time more grade specific
- Shorter sessions, especially in summer
- Take us to visit a school with strong coaching
- Continue focus on specific coaching tasks
- Repeat what was lost on us last summer

### ***Experience as a Coach***

Next coaches were asked to evaluate their experience as a coach during 2007-2008.

Figure 12 below illustrates their overall assessment. Sixty-six percent of the coaches rated their experience positively (23% “excellent” and 42% “good.”) Only 8 percent rated the experience as “poor” or “very poor” (which represents one coach’s evaluation in each instance.)

**Figure 12**



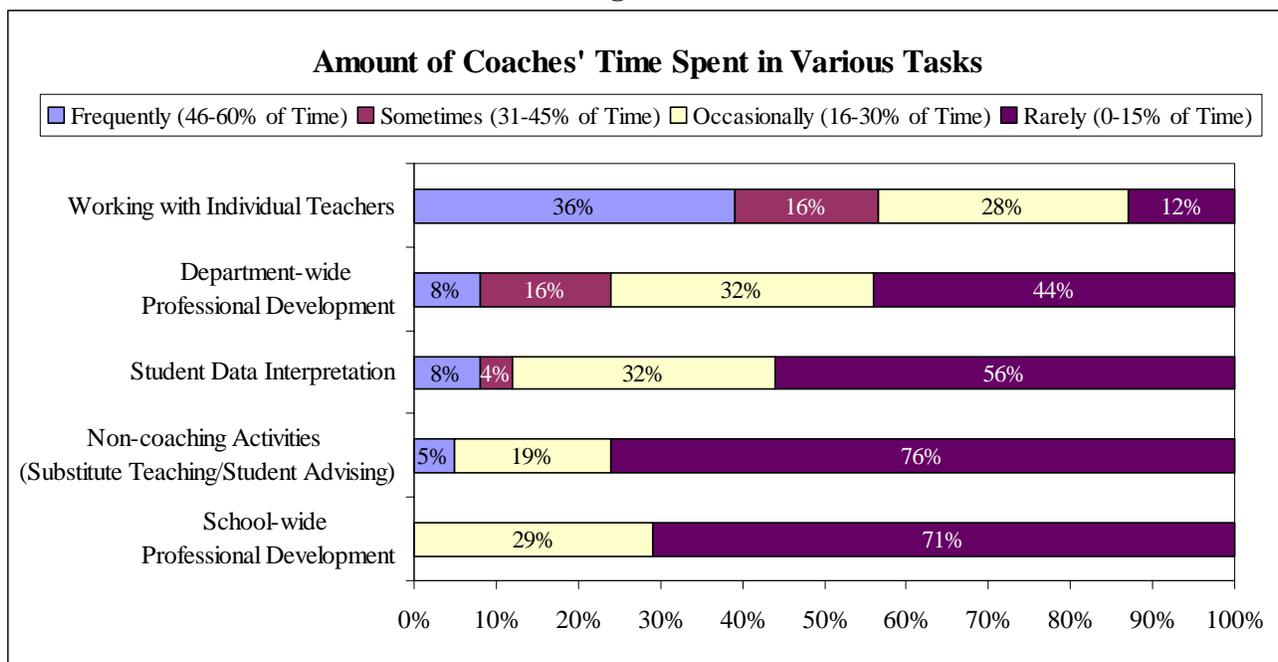
To understand more of what coaches did during the year, coaches were asked several questions about their assignments. Figure 13 illustrates the percentage of time they spent on a variety of tasks, some directly related to coaching and some to more general support of mathematics or the school.

Figure 13 represents the amount of time coaches spent working with individual teachers, conducting professional development for the mathematics department(s) or for the entire school and interpreting student data. Note that these are all activities that the legislation identified as associated with coaching. We also asked how much time they spent engaged in non-coaching activities, such as student advising or substitute teaching. These were assignments we had heard coaches discuss during the professional development session throughout the year.

As Figure 13 illustrates, coaches' assignments varied widely.

- 36 percent of the coaches reported that they worked with individual teachers frequently (46-60 percent of the time).
- Only 12 percent reported that they rarely worked with individual teachers.
- Most coaches (76 percent) reported that they were never or rarely engaged in non-coaching activities.

**Figure 13**



We also asked coaches about the level of experience among the teachers with whom they worked. Figure 14 illustrates the number of teachers each coach was assigned and the teachers' level of experience.

**Figure 14**

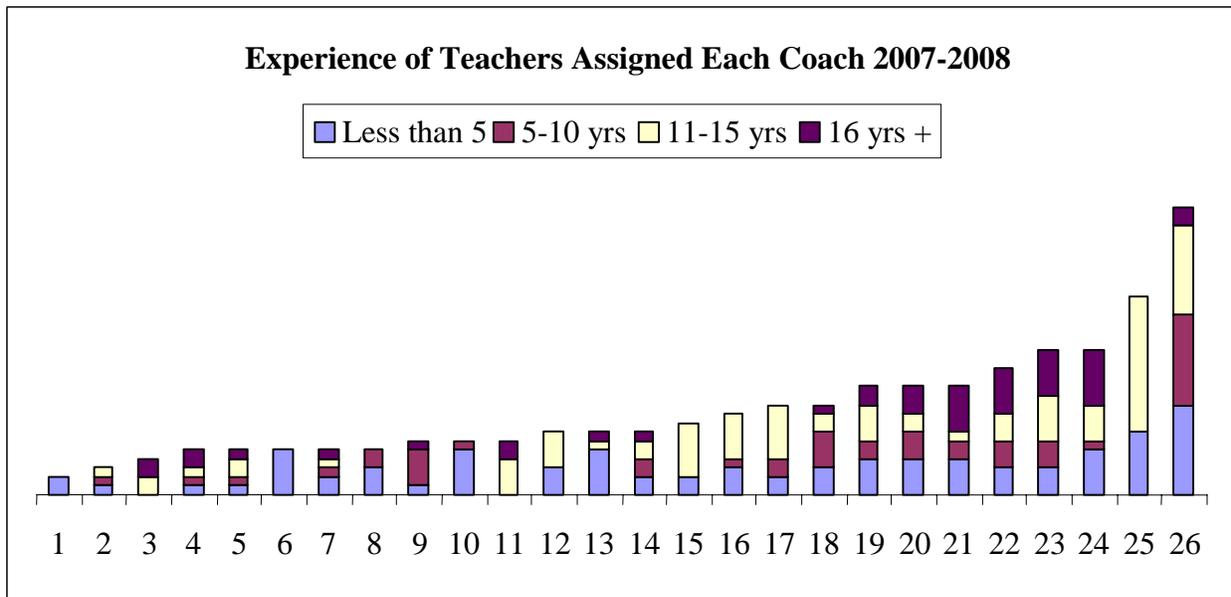
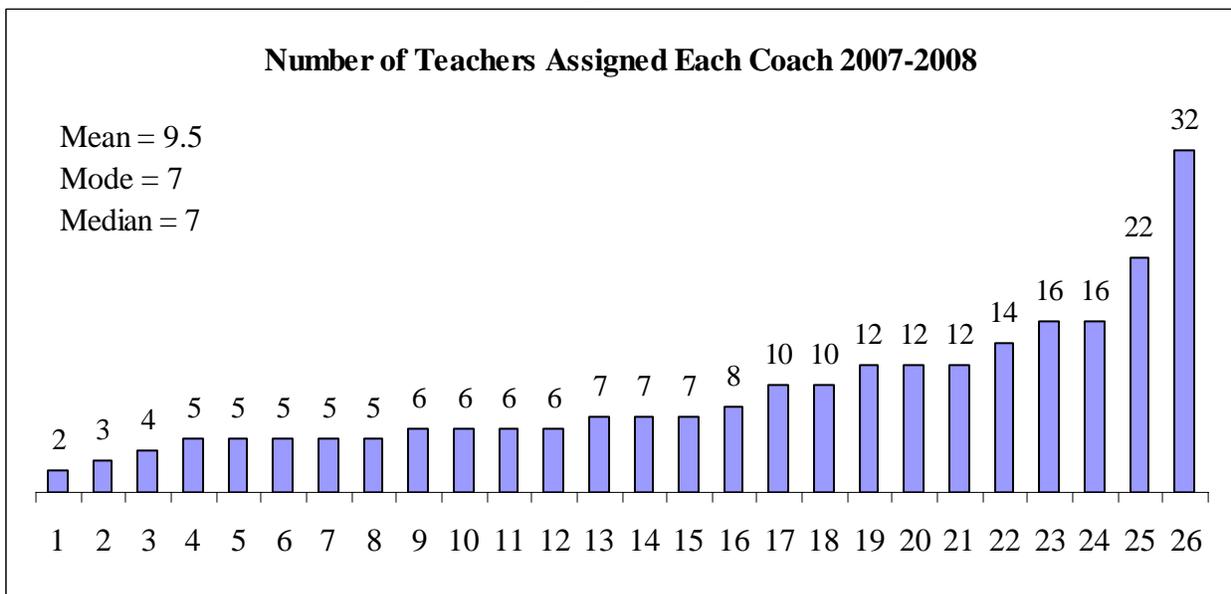


Figure 15 next illustrates how many teachers each coach was assigned to assist. The range is from one to 32, although the average is seven. (Note that no coach provided only one name for the survey. Coaches may, therefore, have referred teachers for whom they had conducted professional development.) Figure 16, further below, correlates the number of teachers assigned with the overall rating of their coaching experience for 2007-2008.

**Figure 15**



**Figure 16**

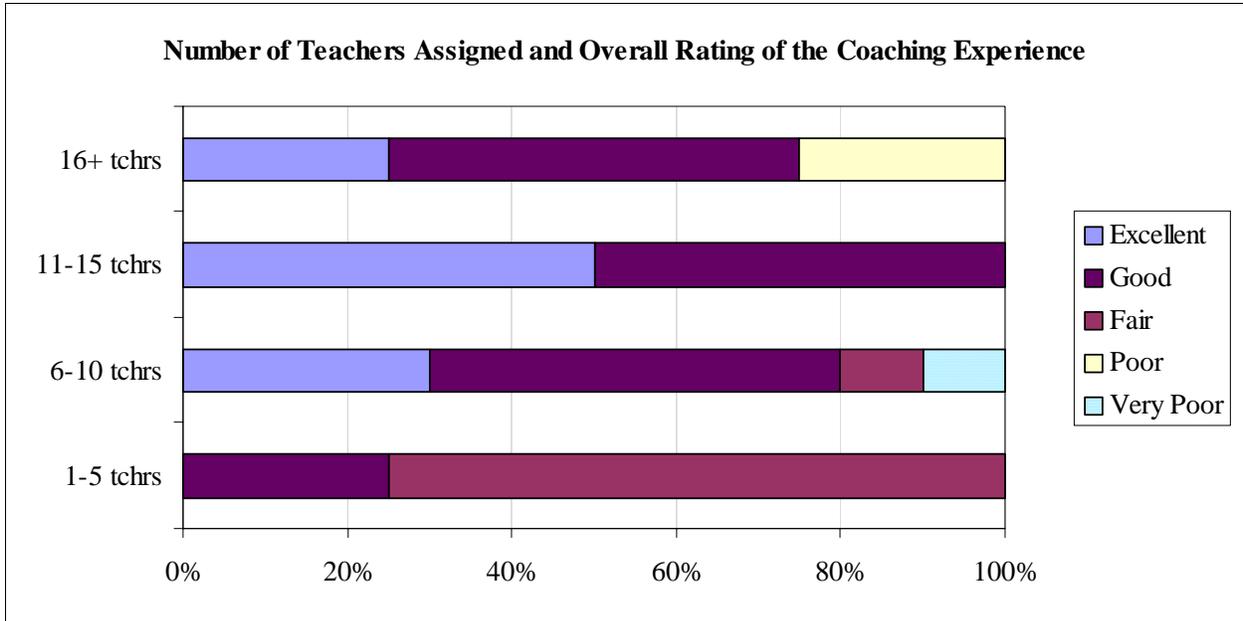
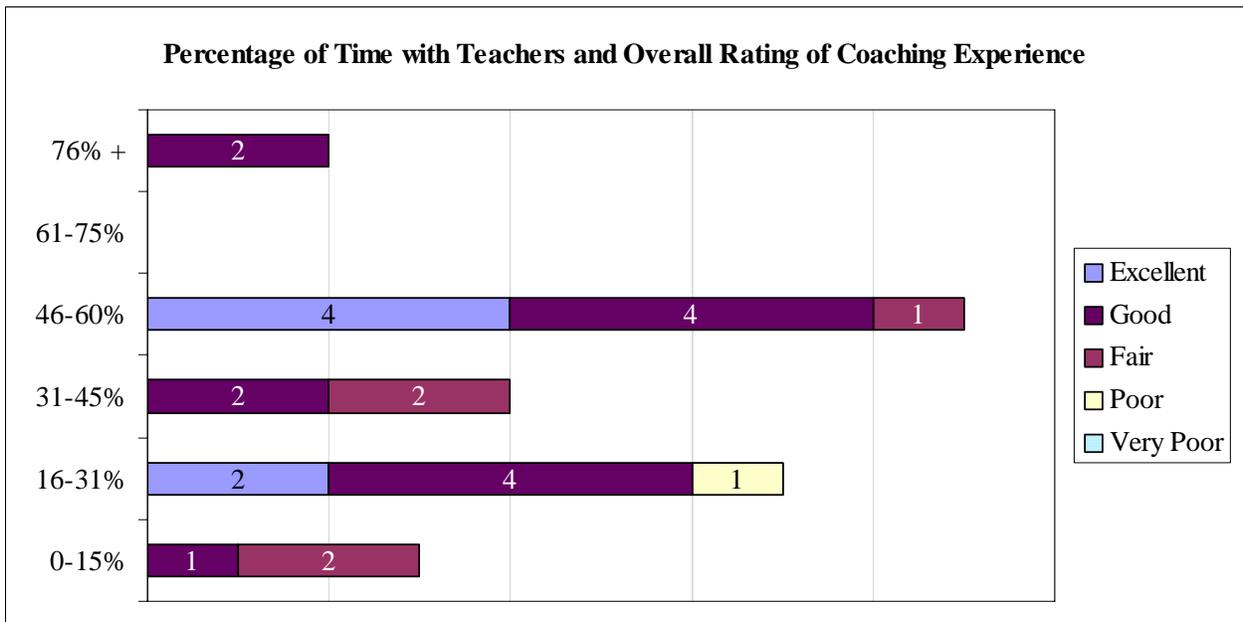


Figure 16 does not indicate any consistent relationship between the number of teachers assigned and the overall coaching experience.

Figure 17 represents the correlation between the kind of work coaches reported doing (directly with teachers, professional development or non-coaching) and the overall evaluation of the coaching experience in 2007-2008. Again, there is no consistent correlation.

**Figure 17**



Overall, we were unable to find a consistent factor in the satisfaction rates of the coaches with their experience overall.

## Support for and Understanding of the Program

Coaches were asked to evaluate OSPI’s general support of the mathematics coaching program and, more specifically, salient elements of OSPI’s communication about the program.

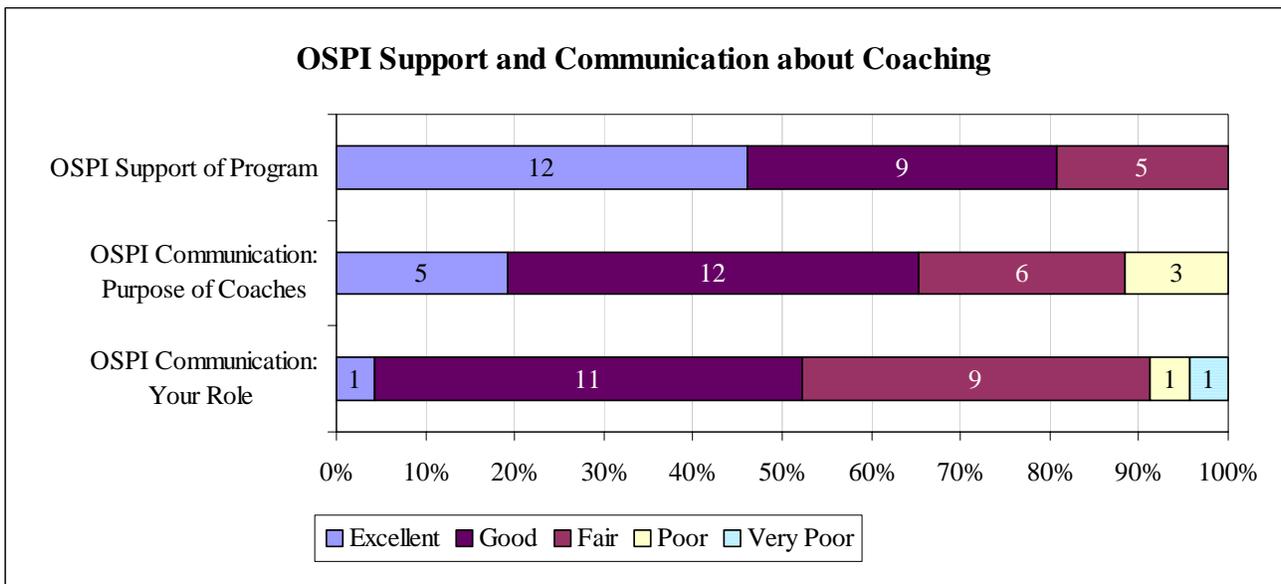
The overall evaluation was high:

- 12 coaches rated OSPI’s overall support as “excellent”
- 21 coaches (81 percent) rated OSPI’s support as “excellent” or “good”.
- There were four “fair” ratings, but no “poor” or “very poor.”

The ratings were lower for specific aspects of OSPI’s communication about coaching, as shown in Figure 18:

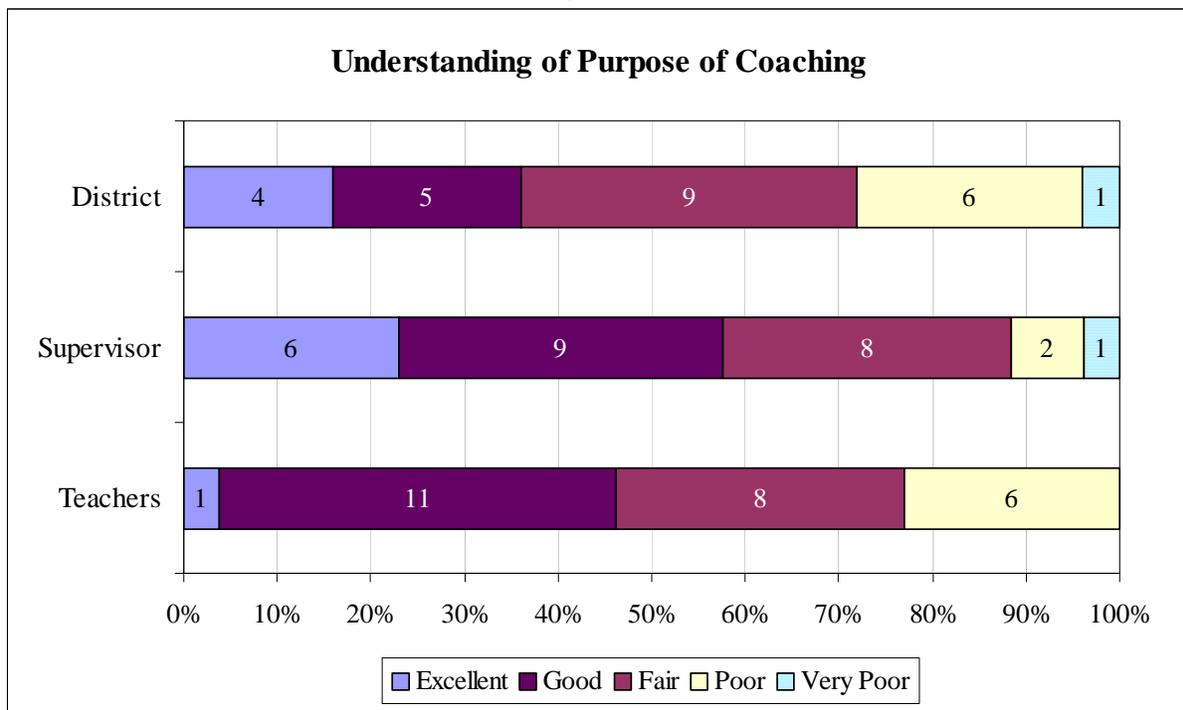
- Only five coaches (19 percent) rated communication about the purpose of coaching as “excellent”, while three rated it as “poor” (12 percent).
- And only one coach rated OSPI’s communication about the coach’s role as “excellent”, while one rated it “poor” and one as “very poor.” The largest number of coaches (20) rated the communication on coaches’ role as “good” or “fair” (42 percent “good” and 35 percent “fair”).

Figure 18



When coaches were asked more specifically how well their district administrators, supervisors, and teachers understood the purpose of coaching, there was again a wide range in their ratings, as illustrated in Figure 19 below.

**Figure 19**



- Nine coaches (35 percent) rated the district administration understanding of the purpose of coaching as “excellent” or “good.” But seven coaches (27 percent) rated district-level understanding at only “poor” ( 23 percent) or “very poor” (1 coach, 4 percent).
- There appeared to be more confidence in the immediate supervisors for whom 15 (59 percent) of the coaches rated their understanding as “excellent” or “good.” Only three coaches (12 percent) rated the supervisor’s understanding as “poor” or “very poor.”
- Only one coach rated teachers’ understanding of coaching as “excellent.” Yet many rated teacher understanding as “good” so that the overall “excellent” or “good” rating for teacher understanding was 46 percent.

### ***Coaches’ Experiences:***

When coaches were asked for their comments on their greatest successes during 2007-2008, they replied:

- Convening collaborative groups/doing joint work (8 responses)
- Teachers using the information coaches provided (4)
- Building relationships (4)
- Being welcomed by teachers (3)
- Developing a WASL prep course
- Being out of the classroom

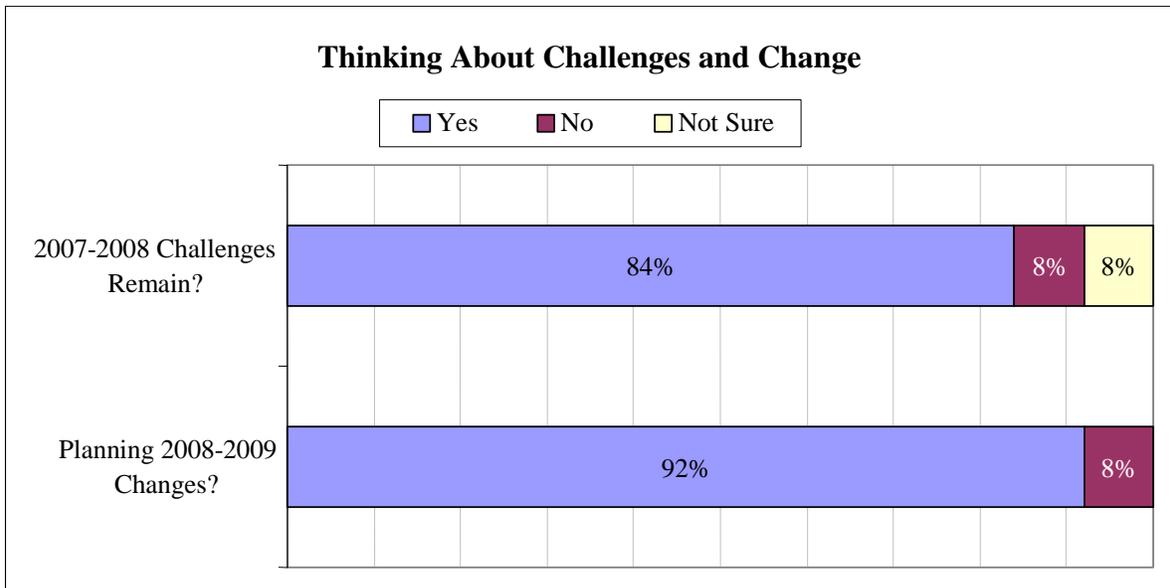
And asked about the greatest challenges, they reported:

- Teacher resistance to coaching or to the belief all students can learn math (5)
- Insufficient administrator support (5)
- Finding time for direct work/teachers' limited time (4)
- Trying to reach everyone; feeling spread too thin (3)
- Doing the one-on-one work (3)
- High School! (3)
- Creating consistency among teachers
- Part-time assignments
- Non-coaching math needs: distractions, but they still need to be done
- Defining the coach's role
- Building credibility

### ***Planning for 2008-2009***

Considering the challenges, coaches were asked if those same issues remain and 84 percent (22 coaches) said “yes.” Only two said “no” with another two “not sure.” Coaches were also asked if they were planning changes to their coaching for 2008-2009. Ninety-two percent (24 coaches) said “yes.” See Figure 20 below.

**Figure 20**



Specifically coaches said they planned to:

- Stress direct work with teachers and deflect more non-coaching tasks (4 responses)
- Work more closely with administrators
- Be more involved with teachers (2) and classrooms (2)
- Meet with teachers during summer and early in the year to set goals
- “Push harder, dig deeper”

### ***Suggestions and Comments***

And when asked more broadly how the mathematics instructional coaching program could be improved, they suggested:

- Change the order of the trainings (2)
- Differentiate between new and experienced coaches
- Provide more information on how to teach pedagogy
- Provide more and better materials for teachers
- Provide more help targeted at high school
- Shorter training sessions

General comments from the coaches expressed strong support for the program as well:

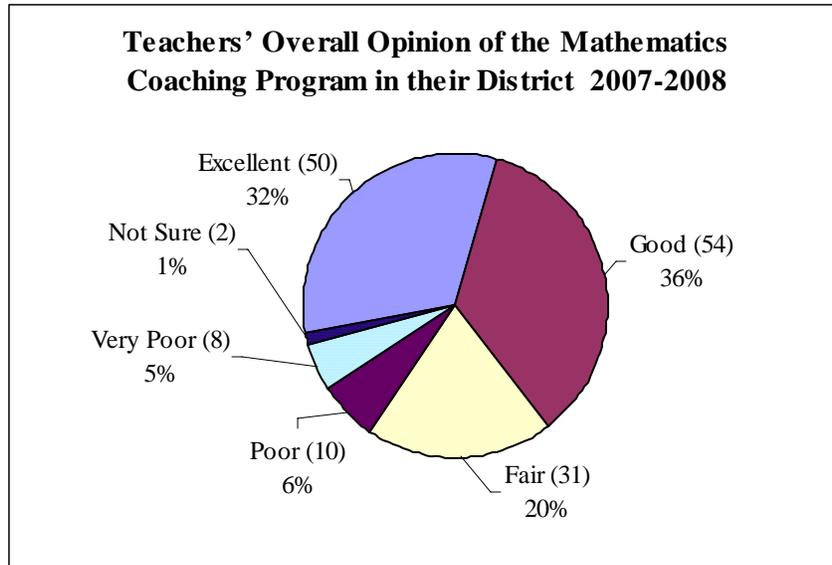
- Enjoyed it; valued it, appreciated the opportunity
- Need to strengthen administrator understanding and support
- Utilize the National Staff Development Center
- Keep a clear focus

## WHAT THE TEACHERS SAID

### Overall Assessment

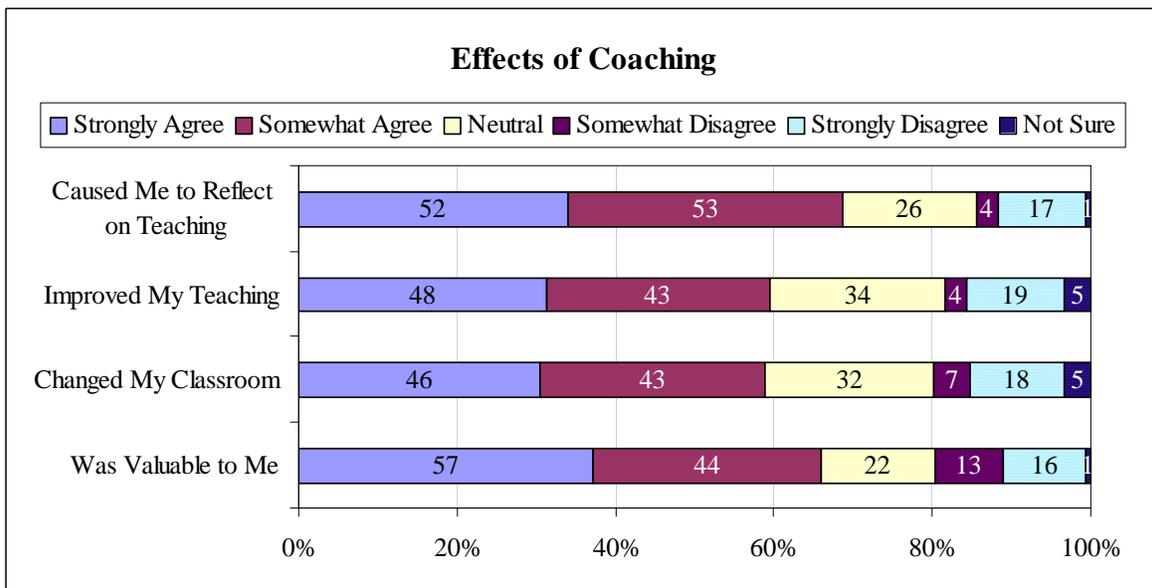
The 157 teachers who responded to the SESRC survey generally gave supportive ratings to the 2007-2008 mathematics coaching experience. Sixty-eight percent gave the program high marks, rating it “excellent” or good”, and only 12 percent rated it “poor”, “very poor”, or were “not sure”, as Figure 21 illustrates.

Figure 21



Most importantly teachers were asked what effect coaching had. Figure 22 illustrates that teachers largely acknowledged that coaching does drive change.

Figure 22



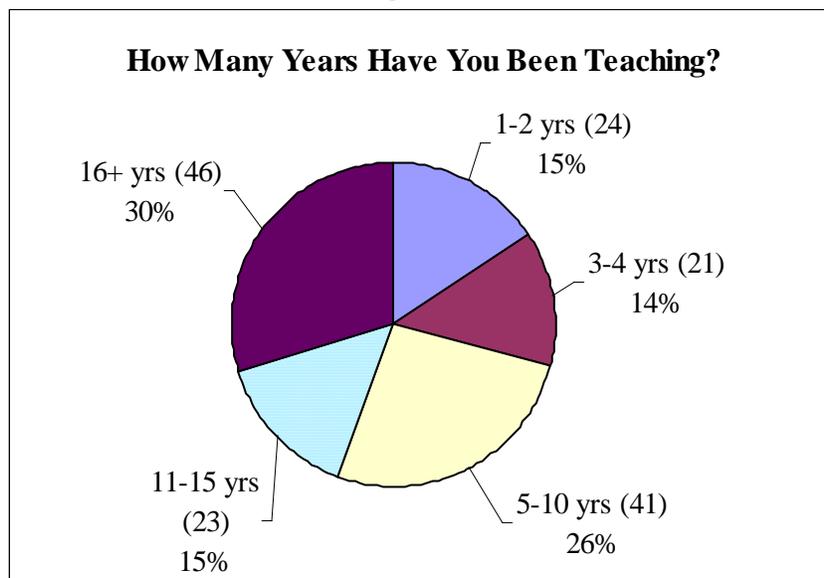
## FINDING:

- **Sixty-nine percent of the teachers agreed that coaching had caused them to reflect on teaching;**
- **Sixty percent reported that coaching had changed their teaching;**
- **Fifty-nine percent said coaching had changed their classroom<sup>8</sup>;**
- **Sixty-six percent felt that coaching was valuable to them.**

### *What Correlates with Teacher Approval?*

To test the presumption that more experienced teachers are less supportive of coaching than those with less experience, figure 23 illustrates the experience of the teachers participating in the survey.

**Figure 23**



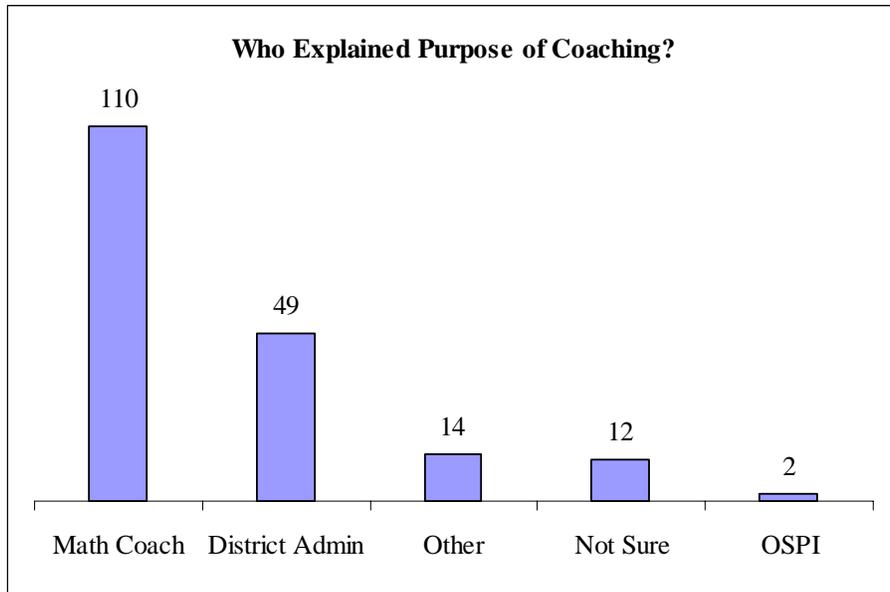
The number of experienced teachers is much higher than the total of negative rating (only 11 percent rated the program as “poor” or “very poor” while 30 percent of the teacher-respondents reported sixteen or more years of teaching experience). Similarly, the positive ratings of “excellent” and “good” totaled 68 percent, while the total number of teachers with 15 years experience and less are only 55 percent of the teachers.

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<sup>8</sup> Note that the n for most questions was 153, but for “changed my classroom” it was 151.

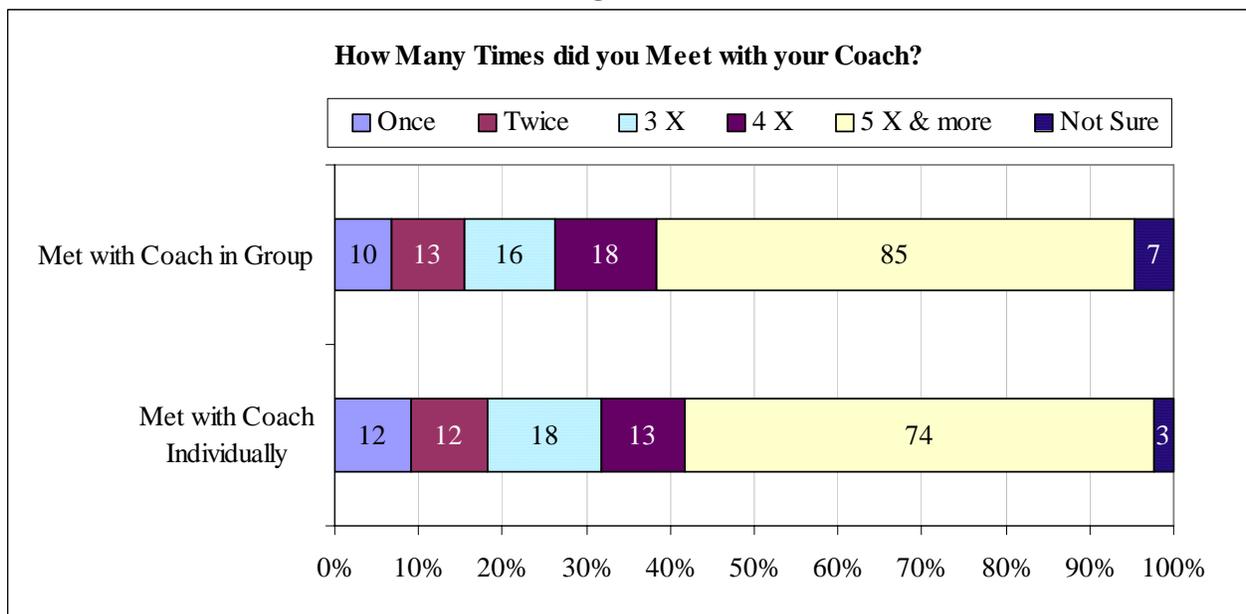
To further determine the teachers' experience with coaching, they were first asked who had introduced them to the purpose of coaching. See figure 24. (More than one answer was allowed.) Clearly most teachers learned about coaching from someone inside their districts. Only 28 percent learned about coaching from another source (or were not sure.)

**Figure 24**



Attitudes toward coaching might also pertain to how often teachers were exposed to it. They were asked how many times they had met with their coach, distinguishing between group and individual meetings. Figure 25 shows that in either the group or individual settings, coaches were commonly meeting with teachers 5 times or more.

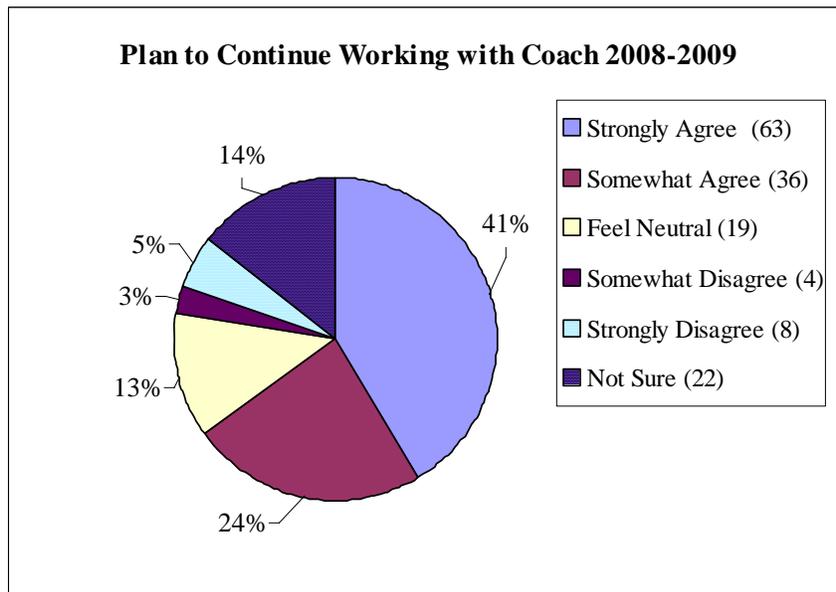
**Figure 25**



## Teachers Anticipate 2008-2009

Teachers were first asked whether they expected to continue working with a coach for a second year. Figure 26 shows that 99 respondents (65 percent) expect to continue. Nineteen of the coaches were neutral about continuing (13 percent.) Only 12 coaches did not expect to be working with a coach (8 percent), twenty-two teachers were not sure (15%).

Figure 26



Teachers were also asked about how much time they would like to have with their coach and about their expectations for the coming year. Figure 27 illustrates that 20 percent of the teachers would like more time with their coach while only 11 percent would like less. The most common response, from 38 percent of the teachers, was the same amount of time as this year.

Figure 27

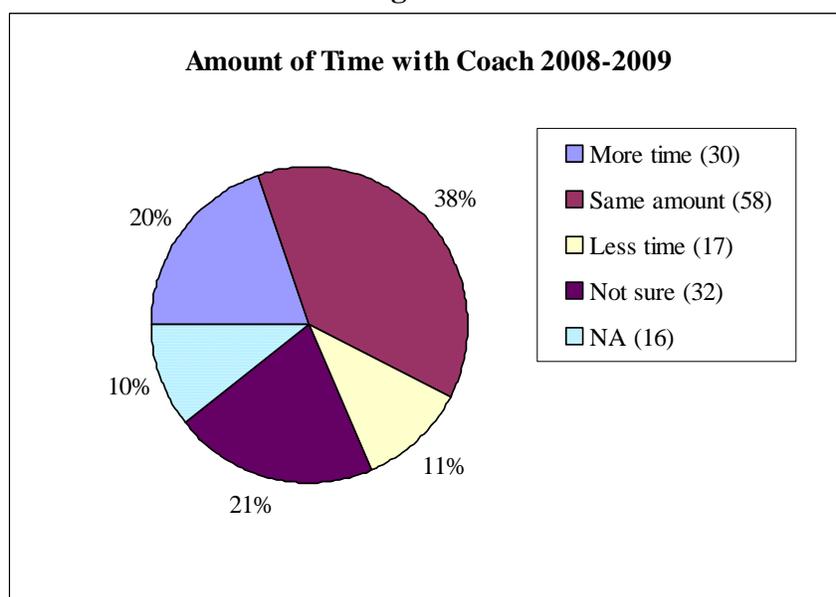
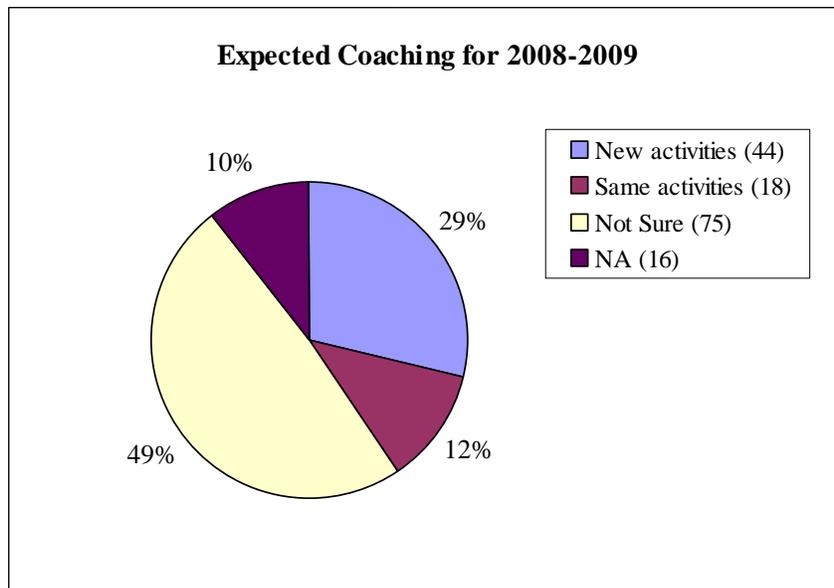


Figure 27 also shows that a fairly large portion of the teachers reported being unsure about how much time they would like with their coach (21 percent – plus 10 percent who did not respond). Those figures may relate to the high number of teachers who report being unsure what will happen with coaching next year, as shown in Figure 28 below.

**Figure 28**



### ***What Teachers Would Change***

Teachers were given the opportunity to specify the things they would like to change about being coached, based on their 2007-2008 experience. Here’s how they responded:

- Nine teachers wanted the coach more available to them. Two others may have been expressing the same sentiment when they said that coaches should have fewer other obligations.
- Nine teachers wanted the coaches to help more with their content delivery, especially by providing more practical applications and instructional strategies.
  - Other specific requests were for examples of student-led exercises, help targeting specific mathematics strands, more high school examples, and more help with the new standards.
  - Teachers also wanted grade specific assistance (“Know my grade”) and suggested that coaches should be working with all the teachers of a single course.
- Teachers offered suggestions about the coaches’ methods.
  - Five teachers wanted the coaches to be more hands-on, requesting that the coach demonstrate techniques in their classroom.
  - Five teachers wanted more feedback, both from coaches and their colleagues, a solid vote for collaborative learning.
  - Other teachers wanted the coach to observe how well teaching and grading were connected.

- More and better organization was also a theme in multiple comments:
  - Three teachers requested a more definite schedule of coaching activities;
  - Five wanted better focus and better organization.
  - The need for better organization and scheduling may also caused five teachers to request that the coach respect their time and particularly their planning period.
  - *The most frequent comment, however, was quite simple, and came from ten percent of the teachers: “Nothing, it was great!”*

Finally, teachers also had the opportunity to comment more broadly. These comments included suggestions for the districts and, apparently, the state. Some (28) were critical:

- Need more time with the coach/spread too thin (7)
- Rather have an additional teacher; the coach spent too much time out of the building (6)
- Not sure this was “coaching” (5)
- Don’t think this helped students/me (5)
- School/district should have explained this better (3 responses)
- Expect more in-depth next year (2)

More of the comments (35), however, were supportive:

- Coaching and collaboration were great. We need more collaboration. (2 responses)
- This is a valuable program (10)
- “My coach was wonderful.” Coaching is very helpful (23)

## SECTION FIVE: INTERIM OBSERVATIONS

### LOOKING FOR PATTERNS

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There is no written guidance to districts about the type or amount of work coaches should be assigned. Lacking that, SESRC found a wide variance in the number of teachers, buildings and grades for which coaches were responsible.

There was also a wide variation in how coaches felt about their first year as mathematics instructional coaches. We did not determine any consistent correlation between the variables in their assignments and their satisfaction.

### INTERIM FINDINGS

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- The mathematics instructional coaching program received positive evaluations from administrators and teachers.
  - 88 percent of administrators rated the program “excellent” or “good”;
  - 90 percent of the administrators thought the coaching program had contributed to student learning in their district.
  - 68 percent of the teachers who were coached rated the program “excellent” or “good”.
  - 60 percent of the teachers reported that coaching had improved their teaching.
  - 58 percent of the teachers said coaching had changed their classrooms.
  - 88 percent of the teachers wanted at least the same or even more time with the coach in 2008-2009.
- One opportunity OSPI apparently missed was the chance to help guide districts’ selection of coaches. A more functional description of the duties of a coach could have been useful to school administrators and applicants. It might well have helped some districts understand the importance of the personal characteristics of a successful coach. And it would have helped districts better anticipate the customary activities of a coach, which might in turn have improved the districts’ understanding of the supports needed for effective coaching and reduced the number and amount of extraneous assignments several coaches reported. Further, such a description might have increased building administrators’ understanding of their crucial role in the success of coaching.
- More communication between OSPI and districts about the conditions necessary for a strong coaching program might have eliminated another source of friction between several coaches and their administrations, in particular time out of district. In coaching initiatives in other states, programs suffered when the coaches were not sufficiently knowledgeable of the state’s content standards. Washington’s coaches were generally quite familiar with the content standards for mathematics. Some coaches were so well versed that they served on the mathematics standards revision workgroups during the year. Some of their districts, however, considered the time away from their assigned schools detrimental to the developing coaching program. It could be that the combination of ten days of professional development and the standards work negatively affected some coaches’ opportunity to build strong relationships with their teachers. In other instances, however,

the perception of coaches spread too thin that may have resulted when coaches had a high number of buildings to support.

## **NEXT STEPS**

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During 2008-2009 SESRC will:

- Conduct an end-of-year survey with the continuing mathematics instructional coaches, their administrators and the teachers they coach;
- Conduct an end-of-year survey with the new science instructional coaches, their administrators and the teachers they coach;
- Further investigate possible correlations between coaches' background characteristics, elements of their coaching assignments, and positive satisfaction of the teachers.
- Investigate the effects of instructional coaching on student performance.

## APPENDIX A

### OSPI'S ORIGINAL GRANT AWARDS

ESD	DISTRICT	SCHOOL 1	SCHOOL 2
113	Aberdeen	J M Weathermax HS	Miller JHS
121	Auburn	Cascade MS	Olympic MS
112	Battle Ground	Laurin MS	Pleasant MS
171	Brewster	Brewster MS	Brewster MS
171	Bridgeport	Bridgeport MS	Mansfield JHS/HS
114	Central Kitsap	Klahowya Secondary (10-12)	Klahowya Secondary (7-9)
105	Cle Elum-Roslyn	Cle Elum HS & Thorp and Easton Secondary	Walter Strom MS
189	Ferndale	Ferndale HS	Horizon MS
105	Grandview	Grandview MS	Grandview HS
189	Granite Falls	Granite Falls MS	Granite Falls HS
112	Longview	Monticello MS	Mt. Solo MS
189	Lopez	Consortium w/San Juan Island, Orcas, and Shaw SDs	
101	Medical Lake	Medical Lake MS	Medical HS
171	Moses Lake	Frontier MS	Chief Moses MS
189	Mount Vernon	LaVenture MS	Mount Baker MS
101	Nine Mile Falls	Lakeside HS	Lakeside MS
113	North Thurston	River Ridge HS	Timberline HS
189	Oak Harbor	North Whidbey MS	Oak Harbor HS
123	Prosser	Prosser HS	Prosser MS
121	Seattle	African American Academy	Aki Kurose MS
105	Selah	Selah JHS	Selah HS/Academy
101	Spokane	Lewis and Clark HS	North Central HS
121	White River	White River MS	Glacier MS
121	Tukwila	Showalter MS	Foster HS
123	Walla Walla	Walla Walla HS	Paine Alternative HS