

Leading the Way to Improved Student Achievement

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IT CERTAINLY HAS BEEN AN EXCITING YEAR FOR MATHEMATICS EDUCATION IN OREGON! In the summer of 2016, districts across our state received their first comprehensive set of Smarter Balanced Assessment scores in mathematics. Coupled with the adoption of newly approved mathematics curricula in almost every district, this has meant a time of adjustment for students, teachers, administrators, and communities. Many Oregon districts now look to teacher leaders, instructional coaches and mathematics specialists to facilitate this transition.

Do you know that Oregon now has a mathematics specialist option? For years we have had reading specialists in our elementary school classrooms, but no (TSPC approved) mathematics specialist option. This changed in 2014 when TSPC finally recognized the desperate need for trained specialists in K - 8 mathematics. The TSPC Elementary Mathematics Instructional Leader (EMIL) specialization defines specific standards to illustrate the professional knowledge needed by K – 8 mathematics leaders. Furthermore, earning an EMIL specialization, "... indicates the educator has demonstrated exceptional knowledge, skills and related abilities in [mathematics education]." (TSPC, 2017)

What are the TSPC Elementary Mathematics Instructional Leader requirements?

1. An Elementary Mathematics Instructional Leader specialization may be added to any TSPC Basic, Standard, Initial or Continuing Teaching License upon completion of the requirements and qualifications found in this rule.
2. To be eligible for the Elementary Mathematics Instructional Leader (EMIL) specialization, the licensed teacher must have all of the following:
 - a. The Commission-approved Multiple Subjects Examination;
 - b. Three complete years of teaching mathematics as verified by a Professional Educator Experience Form (PEER) or other verifiable experience if obtained out of state; and
 - c. Demonstrated competency in the following Elementary Math Specialist (EMS) standards as determined by a program approved to offer the Elementary Mathematics Instructional Leaders specialization as evidenced by completion of:
 - A. Twenty-four quarter or sixteen semester hours of a TSPC-approved Elementary Mathematics Instructional Leader program; and
 - B. An EMIL practicum working with a range of students and teachers.

—(TSPC, 2014)

What impact do elementary mathematics instructional leaders have?

The research is clear that when K-8 mathematics specialists go through a rigorous, standards-based graduate program, they have a statistically significant impact on student standardized test scores (Campbell and Malkus, 2011). This is not necessarily the case for specialists with less expertise that have not been through a program.

We asked our recent WOU-EMIL graduates how the program has changed them as professionals. Laurie Andrew, 6th grade teacher at St. Paul Elementary in Newberg, felt the courses impacted her practice right away, "All the work we did with analyzing student work for misconceptions and understandings and then deciding learning trajectories was extremely helpful. Even within my own practice I am analyzing and evaluating student work much more thoughtfully. Another area the program has helped me is understanding the social learning context and engaging learners in rich mathematical explorations and discussions." Lillian Erb, 3rd grade teacher at Madison

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Elementary in Coos Bay, shared, “I went into this program feeling like I had a pretty good handle on teaching math. Now, I feel like a completely different teacher. I approach planning instruction with different goals in mind. I presented to parents at my school about how and why math has changed since they were in school. It was the scariest and most exciting thing I have done as a teacher! I never would have had the desire or the knowledge to do that without this program.”

How do you become an Elementary Mathematics Instructional Leader?


Currently, there are two programs authorized to offer the EMIL Specialization in Oregon. Western Oregon University has a fully online program (wou.edu/EMIL) and Portland State University has a face-to-face program (pdx.edu/ci/deepening-math). Both programs align to the required TSPC Elementary Mathematics Specialist Standards (AMTE, 2012) and are almost identical to the program described in Campbell and Malkus (2011).

What is in the Elementary Mathematics Instructional Leader programs?

The Oregon EMIL programs consist of five mathematics and three education graduate courses. At WOU, where the authors of this article teach, the mathematics coursework addresses the Teacher Standards and Practices Commission (TSPC) Standards. Each of the five courses is also aligned to a different Domain of the K - 8 Common Core State Standards for Mathematics (CCSSM). The education classes include courses on advanced mathematics pedagogy, teacher leadership and a practicum. All EMIL graduates become experts in K - 8 mathematics and are prepared to assume leadership roles in their classrooms, buildings, and districts as needed.

Teachers interested in our EMIL program typically spread their coursework over two years with one class each quarter. We expect EMIL graduate students will continue their work in their schools as they proceed through our program. Our program is designed to be closely aligned to current classroom practices so teachers can immediately relate the EMIL coursework to their day-to-day teaching.

How can I fund the program?

The Oscar Schaaf-Scott McFadden Memorial Scholarship, administered by the Oregon Council of Teachers of Mathematics (OCTM), provides scholarships to classroom teachers who are OCTM members to help them continue their professional growth in mathematics education through coursework at the graduate level. The scholarship will be awarded to a teacher (any grade level K-College) who exhibits enthusiasm and dedication in mathematics education for future mathematics graduate-level coursework. The scholarship is available for tuition only (maximum amount \$750). Funds will be reimbursed to the recipient after proof of receipt and completion of the course. The recipient must be an OCTM member and preference will be given to Oregon teachers. Applications for this scholarship are due April 15 each year. The application form is available on the OCTM website or check your January/February or March/April issue of *TOMT*. 

Each institution may also have funds available to assist with tuition and expenses. There are vouchers, grants, and university scholarship funds that students can access when available. It is best to contact the program coordinators (Dr. Rachel Harrington, harringtonr@wou.edu and Dr. Nicole Rigelman, rigelman@pdx.edu) for more information about specific options.

References

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