BLENDED LEARNING IN THE PROFESSIONAL DEVELOPMENT OF MATH TEACHERS: LESSONS FROM THE RUSSIAN SCHOOL OF MATHEMATICS

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Based on the Vygotskian school of thought and social-constructivist approach to math education (Vygotsky, 1978), the Russian School of Mathematics (RSM) is a unique after-school program teaching over 40,000 students. In this study, we present the empirical model of teacher training at RSM, including face-to-face and distance learning in various formats, and discuss the challenges and opportunities of the blended instructional approach for effective math teacher training in the context of an afters-chool *program.*

FRAMEWORK OF BLENDED PROFESSIONAL DEVELOPMENT AT RSM

Over 800 teachers work with RSM students in grades K-12 across the USA and Canada, offering three levels of mathematical instruction based on a student's mathematical background.

The majority of new teachers coming to work as after-school instructors at RSM have a solid knowledge of mathematics but are not professional educators. Therefore, to build pedagogical content knowledge (Shulman, 1986), the RSM Training department employs a variety of training formats and platforms to provide professional development in the methodology of teaching mathematics and psychology of mathematics education. The formats include virtual classes, Google meets, online courses, and online webinars. The figures below present the survey data that illustrate the benefits and challenges of the blended approach, an approach that combines the distance learning formats with face to face workshops, classroom observations, shadowing and mentoring practices.

The training assessment data collected for this study suggest research and development strategies aimed toward building systematic assessment of the blended professional development in the after-school math program context. Tracing the indirect results of professional development to identify impacts on students is notoriously difficult (Guskey, Sparks, 1997), but due to systematic collection of the data we explore the links between some formats of teacher training and student performance in the classroom.

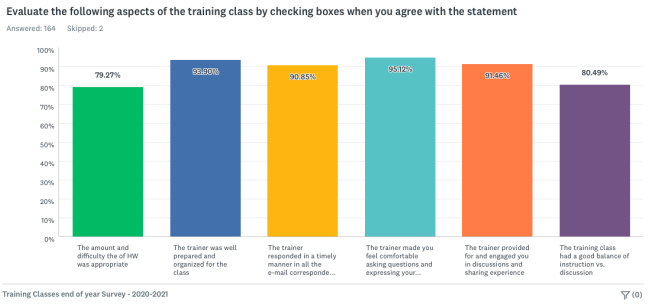

Figure 1: Feedback on the quality of the classes

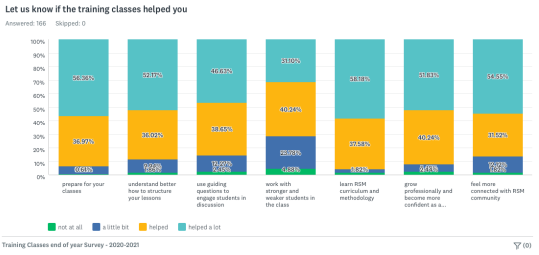

Figure 2: Feedback on the value of the training classes

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