

## EVOLUTION OF ELEMENTARY MATH LEADERS' COLLABORATIVE PLANS FOR SCHOOL-LEVEL CHANGE

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Research is needed to better understand how elementary teachers develop and make progress toward enacting and supporting new visions of mathematics instruction while transitioning to an informal leadership role (Chval et al., 2010). This study follows 13 elementary mathematics teachers within a Midwestern United States school district who are pursuing Elementary Mathematics Specialists (EMS) certification through fellowships provided via a project funded by the National Science Foundation. The fellows, working in six school-based teams, were asked as a part of their program to create and maintain action plans: revisable documents outlining their evolving visions and plans for improving mathematics teaching in their schools. In analyzing these plans, we investigated the question: What initiatives do the groups plan to implement in their buildings, and how do these plans evolve over the course of the school year?

Initial data included focus group interviews with each team and all four iterations of the action plans. Each school team submitted a revised version of their action plan monthly as a part of their EMS course. In order to name the ways in which each team evolved throughout the course of the project, we defined the following components of the fellows' plans: the scope of the initiative (within-own-classroom, grade-level teams, schoolwide, district-wide), focus (challenging perceptions of student competency, building a positive mathematical culture, supporting student identity formation through instructional practices), and medium (collaboration between mathematics leaders, grade-level collaboration, professional development, teacher observation, class restructuring).

A cross-case comparison revealed multiple trajectories for the groups of fellows. While five of six school-based teams named goals for their own classroom instruction in the first iteration of their plan, not one team applied a schoolwide lens. However, on the fourth iteration, all six teams were seen to employ a schoolwide lens. Interestingly, we found that only one school had maintained the same focus on “eliciting student thinking/providing student feedback” from the first to fourth version of their action plan, and that particular team additionally named that focus at a schoolwide level on the fourth iteration.

We also examined various factors of support (district, administrative, colleagues) and identity (leadership and confidence in mathematical content knowledge) as potential impacts on the trajectories followed by each school team. For example, one school team began to apply a schoolwide scope due to an empowering administrator who asked the fellows to develop professional development for staff, while another team adopted a schoolwide scope because the team perceived their peers' conceptions of student competency as deficit-based. Future analysis will continue to monitor the evolution of fellows' action plans for the duration of the larger project.

### References

- Chval, Kathryn B., Arbaugh, F., Lannin, John K., van Garderen, D., Cummings, L., Estapa, Anne T., & Huey, Maryann E. (2010). The transition from experienced teacher to mathematics coach: Establishing a new identity. *The Elementary School Journal*, 111(1), 191-216. doi:10.1086/653475.