

Transformative Professional Learning in West Virginia

Carnegie Learning has partnered with the West Virginia Department of Education Office of Special Programs since 2011 to provide professional learning to West Virginia teachers.

The first cohort included 119 educators (primarily special education) and was representative of 35 counties from across the state. This cohort received an extensive amount of professional development totaling over 130 hours, including:

- 5-day face-to-face academy (Summer 2011)
- 2 follow-up face-to-face sessions (Fall 2011 and Spring 2012)
- Completion of a series of self-paced online modules using Carnegie Learning software
- 5 day face-to-face academy (Summer 2012)
- 2 follow-up face-to-face sessions (Fall 2012 and Spring 2013)
- Completion of an additional series of self-paced online modules using Carnegie Learning software

I am confident in analyzing mathematical tasks



I have a strong knowledge of the Standards for Mathematical Practice



I can differentiate high- and low-level cognitive tasks and their implications for teaching



I have a strong knowledge of algebraic functions



I have the ability to examine multiple representations of algebraic functions



I am confident in comparing linear, quadratic and exponential functions



I use technology to explore algebraic functions



Overall, my knowledge of ratio, proportional reasoning, rate, and algebraic functions is adequate to the task of teaching those ...



PERCENTAGE (n=77)

Change in Math Academy Content Knowledge and Attitude Year 2, 2012-2013



An extensive research study following the initial cohort (Mathematics Academies: Cohort 1 Evaluation Study, Stohr, 2013) found that:

- At the conclusion of year 1, over 71% of participants reported an increase in their math content knowledge
- At the conclusion of year 2, nearly 80% of participants reported having stronger knowledge of algebraic functions
- 78% said they were better able to differentiate high and low level cognitive tasks
- 69% indicated stronger knowledge of the Standards for Mathematical Practice
- 66% reported increased confidence when analyzing mathematical tasks
- Pre/post test data show statistically significant mathematics content and pedagogical knowledge gains in the area of proportional reasoning

The study concluded with the recommendation to continue offering these math academies to West Virginia teachers. As a result, we continue to partner with the West Virginia Department of Education, and have worked with approximately 1,000 educators across the state.