

PIMSER - A Decade of Impact 2005-2015

PIMSER was established in 2005 for the purpose of continuing the impact of the Master Teachers (Regional Teacher Partners) to be regional resources and extend the work of two NSF-funded projects, the Appalachian Rural Systemic Initiative (ARSI) and the Appalachian Math Science Partnership (AMSP). Both of the projects ARSI and AMSP received supplemental funding from the NSF to develop Master Teachers over a three year period. It is staffed by four full-time employees of the University of Kentucky, plus 10 Regional Teacher Partners who are independent contractors and provide PIMSER's services to all school districts in Kentucky. PIMSER provides needs-based trainings that are aligned with the state's educational priorities and goals placed on districts for math and science improvement.

HOURS OF TRAINING and NUMBER IMPACTED

Since 2005, **PIMSER has trained 14,599 people for a total of 220,261 training hours** (Table 1). Many participants receive multiple trainings; therefore, the number of **unique individuals** served during that time is **8,465**. These individuals include district training through contracts; to date there have been over 300 district trainings in 118 districts across the state.

Table 1: Total hours training provided by PIMSER

Year	Total
2005-06	7,590
2006-07	13,946
2007-08	24,977
2008-09	24,775.5
2009-10	27,864
2010-11	30,903
2011-12	24,278
2012-13	30,489
2013-14	18,243.5
2014-15	17,195
Grand Total	220,261

PIMSER has trained educators in every district in Kentucky, through 47 unique sponsored and contracted projects, many of which were multi-year systemic initiatives. **PIMSER has supported every school district in Kentucky, as well as over 11,000 schools and a variety of organizations**, such as educational cooperatives, Kentucky Department of Education, Council on Postsecondary Education, and GEAR UP coordinators and directors. Further representing the extent of PIMSER's reach, there were 70 people from out of state logging 1,620 hours (Table 2).

Table 2: Number of groups that received PIMSER training

	Numbers
School Districts (Includes out-of-state districts)	186
Schools (Includes out-of-state schools)	827
Organizations (Cooperatives, State Agencies, etc.)	63

The opportunities for PIMSER to dialogue with, and impact, education professionals is evidenced by the varying positions represented at training events. While the majority of participants are teachers, administrators are also involved. This indicates a commitment to learning and sustainability of change. The other participants (e.g., state agency, consultants) indicate opportunities to gain (and share) breadth of perspective and exposure regarding training (Table 3).

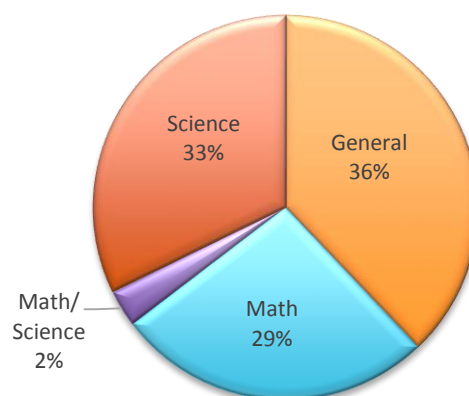
Table 3: Total hours and number of trainees by type

	Total Hours	Number of People
Administrator	35,764.5	2,395
Co-op Consultant	1,992	105
IHE Faculty	1,374	93
Independent Consultant	270	20
Retired	12	2
State Agency	1,818	122
State Association	216	18
Teacher	178,532.5	11,818
(blank)	282	26
Grand Total	220,261	14,599

**Note: numbers are based on total records of 14,599 since participants may shift roles between trainings.*

As would be expected, participants are primarily math and science; however, 36% are teachers from other content areas, such as Language Arts, History, and Social Studies. PIMSER is primarily focused on math and science. However, many of the initiatives can be applied to instruction by teachers of other content areas.

Participants by Content Area

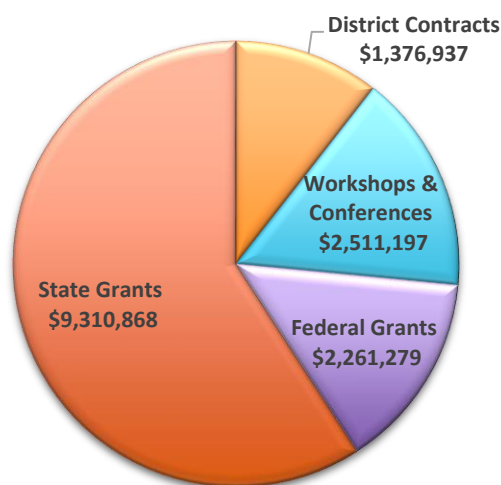


FUNDING

PIMSER has been successful in securing and managing state and federal funding for a broad range of projects. In addition, school districts and other agencies have been willing to invest their own, limited professional development funds in PIMSER's services. This sustained commitment demonstrates that districts value the investment they make in quality professional learning support. The financial support provided to date has made a significant impact on the state infrastructure.

Sources of Funding 2005-2015

Total \$15,460,281



IMPACT

Master Teachers – PIMSER's Workforce

Regional Teacher Partners (RTP) are the workforce of PIMSER, planning and delivering all of PIMSER's professional learning programs. Over \$2.2M from the National Science Foundation has been invested in the development of their expertise. The RTPs are highly-skilled current and retired Kentucky teachers who not only have a passion for learning and helping teachers change their practice, but were also effective at improving student learning in their own classrooms. Most of the RTPs are Master Teachers who were trained through the work of the Appalachian Rural Systems Initiative (ARSI) and the Appalachian Mathematics and Science Partnership (AMSP), and have contributed to innovative, research-based educational practices at the national level. PIMSER continues to invest in these Master Teachers by providing them with the latest resources, research, and materials so they stay on the cutting edge of education.

Clay County High School Shows Greatest AP Gain in National Program - September 2011

Jennifer McDaniel, one of the Master Teachers trained through the NSF grant, applied what she learned in the project and saw marked results with her own students:

AP Calculus Multiple Choice Section	
2010 CCHS Mean: 6.4	2011 CCHS Mean: 29.1
Global Mean: 21.4	Global Mean: 27.6

Because of these results, she began working with other AP teachers in her school, sharing tools and strategies that they could apply to their own classroom. Among the 44 Kentucky public schools participating in Advance Kentucky, Clay County High School led the way with a one-year growth of 634% in Advanced Placement (AP)* math, science and English (MSE) qualifying scores – from 11 to 81. This number is the best in the state among participating program schools with at least 10 qualifying scores from the previous year. Gregg Fleisher, National AP Training and Incentive Program Director of the National Math and Science Initiative (NMSI), said “...in 2011 Clay County High School had the single greatest year in the history of the AP Training and Incentive Program, which dates back to 1990 involving hundreds of schools in seven states.”

Clay County Sustained Growth – AP Calculus Exam

Exam Year	# of Students enrolled	# of students scoring 3	# of students scoring 4	# of students scoring 5
2010	16	1	0	0
2011	18	8	3	2
2012	15	3	3	2
2013	15	3	3	2
2014	22	7	2	4

Casey County High School Math Program Growth 2007-2011

Susan Stringer, another Master Teacher trained through the NSF grant, also saw improved student learning which she attributed to her involvement in the project. By sharing her learning with her entire math department, her school’s math program:

- ranking went from 140th to 21st in the state,
- moved from a Persistently Low Achieving to a Proficient school, and
- the percent of students scoring Proficient/Distinguished on KPREP rose by over 40%.

CCHS KPREP SCORES	
2007	26.99% P/D
2008	36.36% P/D
2009*	47.88% P/D
2010	53.76% P/D
2011	62.3% P/D

**Started work with Master Teacher Project*

Casey County Sustained Growth – Algebra 2 End of Course Assessment

Year	% Proficient/Distinguished
2011-12	63.1%
2012-13	56.4%
2013-14	74.3%

Regardless of the assessment given, the students have scored well which is a testimony to the change in practice that happened in the math classrooms.

Rockcastle County Middle School Science Program Growth 2006-2011

Ken Mattingly, a Science Leadership Support Network participant and PIMSER Regional Teacher Partner, showed improvement in his science department that he attributes to the professional development he received from PIMSER. Starting late in the 2005-2006 school year, the RCMS science department began to implement assessment for learning practices into their curriculum, which was a main focus of the Leadership Networks during that time. RCMS has continued quality assessment practices and their scores reflect this sustained improvement, consistently surpassing the state average by 16+ percentage points.

Year	% Proficient/Distinguished	State Average
2006	58%	57%
2007	70%	56%
2008	74%	60%
2009	84%	63%
2010	75%	57%
2011	80%	64%

Statewide Senate Bill 1 Support

PIMSER created the model for the statewide system of networks to support the rollout of Senate Bill 1. During the initial networks managed by PIMSER, the *Classroom Assessment for Student Learning* resource was introduced and then became the primary text for assessment learning as part of SB1. Subsequently, PIMSER facilitated the statewide assessment training to all Kentucky school districts. During the first year of the statewide networks, PIMSER designed and led the Instructional Leadership Support Network, training over 550 instructional leaders from every school district. These trainings resulted in a common message and infrastructure of support to effectively implement SB1.

Leadership Success

Several educators, mostly classroom teachers, have credited PIMSER with developing their confidence and expertise to apply for local coaching, administrative, and state-level positions.

“PIMSER has helped transform my teaching practice. Because of their ability to sort through ideas and material to locate the critical resources needed by teachers, I know I can depend on their expertise. Every PIMSER professional development I’ve attended has given me valuable information, resources, and insight into improving my teacher practice. It is because of them that I’ve been able to forge a new relationship with my students. My students and I are no longer adversaries. Now we are partners in learning, and are each accountable for what happens in the classroom. Additionally, PIMSER has helped me grow my leadership abilities to the extent that I have had opportunities to work with schools in multiple counties in Kentucky and multiple states in the U.S. on improving their assessment and grading practices.”

Ken Mattingly, Middle School Science Teacher and PIMSER Science Consultant
Rockcastle County Schools

“My experiences with PIMSER have provided me not only the resources but the confidence and background skill set to work with teachers and administrators at the building and district levels on the implementation of the Next Generation Science Standards, College and Career Readiness, student engagement, standards-based grading, growth mindset, congruency of standards with instructional and assessment practices, differentiated instruction, literacy standards in the content areas, the embedding of engineering within the curriculum and many other relevant topics. It is because of this participation I am confident I am leading the teachers of Campbell County Schools in the direction of doing what is best for our students and our community.”

Tim Schneider, Secondary Science Instructional Coach and Teaching and Learning Lead
Campbell County Schools

"I had never considered leaving the classroom and working for the Kentucky Department of Education as a career option. My work with PIMSER has given me the necessary leadership skills and professional confidence to pursue the regional science instructional specialist position with KDE. The professional learning from PIMSER continues to be valuable daily in my work with administrators, teachers and students."

Richard DeLong, Regional Science Instructional Specialist
Kentucky Department of Education

"My five years as a PIMSER Regional Teacher Partner served as a catalyst to my professional growth. I had been teaching for thirteen years, had served as department chair, was a member of our school's SBDM council, and served as a curriculum leader in my building. However, once I became a RTP my understanding of all the dynamics that play in to a successful school was deepened. As a professional development provider to teachers, schools, and districts, PIMSER afforded me the opportunity to learn new skills, become acquainted and work with national level experts, understand curriculum K-12, develop my expertise outside of my personal content area, and push my own thinking in the area of school leadership. For the past five years I have been an assistant principal of a high school with the primary charge of curriculum and instruction. Without the experience that I had with PIMSER, I don't believe that I would have been able to be as effective as I have been. The knowledge and expertise that I developed has been instrumental in my ability to lead our staff, make curricular decisions amidst ever changing mandates, and provide pertinent professional development that has resulted in increased student achievement. The PIMSER experience allowed my educational view to broaden and deepen which in turn has enabled me to be a more productive curriculum leader than I would have been otherwise."

Becky Smith, Assistant Principal
Rockcastle County High School

Relationships with Educational Experts

PIMSER has developed relationships with several national and international educational experts in the fields of mathematics, science, assessment and grading. Educators across the state – especially in rural areas – have had opportunities to learn from these leaders in education through conferences and sponsored projects hosted by PIMSER. Other state educational agencies have capitalized on the expertise of these individuals because of the exposure that PIMSER has provided for them in the state. PIMSER's relationship with these experts has influenced their own work, specifically in their publications.

***Classroom Assessment for Student Learning: Doing It Right - Using It Well (2nd Edition)* by Jan Chappuis and Rick Stiggins.**

"...We are indebted to Kim Zeidler-Watters, Director of PIMSER at the University of Kentucky, and Diane Johnson of Lewis County Schools in Kentucky, for their deep knowledge of implementation of classroom assessment, their examples, and their valuable feedback."

***Tools for Thoughtful Assessment: Classroom-Ready Techniques for Improving Teaching and Learning* by Abigail L. Boutz, Harvey F. Silver, Joyce W. Jackson, Matthew J. Perini**

"...special thanks include Kimberly Zeidler-Watters and her group of Regional and Appalachian Teacher Partners from the Partnership Institute of Math and Science Education Reform, who inspired this book of assessment tools; PIMSER's 2011 Meeting the Challenge conference, whose feedback and ideas influenced the direction of this book."

***Seven Strategies of Assessment for Learning (2nd Edition)* by Jan Chappuis.**

"...to Kim Zeidler-Watters for organizing and directing classroom and interview videos; Stephanie Harmon, Ken Mattingly, Jennifer McDaniel (all PIMSER Regional Teacher Partners) for graciously allowing us into their classrooms to capture the seven strategies in action;...and to administrator Becky Smith (former Regional Teacher Partner) for her reflections on the impact these practices have had on students."