



## Unit Mission

The Partnership Institute for Mathematics and Science Education Reform Mission  
 The mission of the Partnership Institute for Mathematics and Science Education Reform is to enhance learning in mathematics and science for K-16 students and teachers and to prepare students for success in, science, technology, engineering, mathematics (STEM) education and teaching careers.  
 This mission is achieved by creating programs that enhance pre-service teacher preparation, in-service teacher quality, leadership development and support for implementing high-quality instruction, and student access to advanced learning opportunities.

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 1: Research Best Practices Inservice & Preservice
Unit Objective	PIMSER Objective 1.1 Research Barriers to and Best Practices for P-20 STEM education
Related Metrics	PIMSER Metric 1.1.1 Research Five Barriers to P-20 STEM Education Reform
Related Mission Area	Research and Creative Work
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

## Assessment Method

We reviewed the statewide and national research conducted by the units within PIMSER to assess the degree to which it addresses barriers and best practices for P-20 STEM education.

## Actual Results

## Data Tables

Year One data (2009-2010)

Use data tables or Descriptive Results section.

## Descriptive Results

Year 1

In year one, we identified five serious barriers to effective and equitable P-20 STEM education identified over the past year are:

1. lack of programmatic articulation between elementary and middle school, middle school and high school, and high school and postsecondary education;
2. lack of focused and efficient use of professional development days by the school districts for K-12 teacher education needs;
3. lack of appropriate weighting of high school mathematics and science higher level courses in Kentucky high schools for greater credit than the traditional grading scale to counteract the disincentive for taking these courses due to the Kentucky Educational Excellence Scholarship (KEES);
4. lack of sufficient numbers of engagement partnerships between faculty from K-12 schools and higher education institutions to address critical STEM educational challenges and barriers; and
5. lack of continuing education programs ( Colleges of Education) following graduation into the workforce contributing to high dropout rates and insufficient continuing education.

The PIMSER research agenda is addressing these five barriers. The research agenda of PIMSER continues to address the best practices to overcome these barriers.

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

## Improvement Actions

Year 1

New opportunities that have arisen in the state that have provided justification and support for the research leading to these results include recent initiatives to improve P20 STEM education on the part of the Kentucky Department of Education and the Council on

We will increase our efforts to work with the STEM and STEM education related departments to partner with, and obtain funding from, the KDE and CPE, as well as national funding agencies to support the research agenda in PIMSER's goal 1.

Postsecondary Education. These initiatives have, in some cases, included best practices from the AMSP that supported activities leading to legislation such as Senate Bill 1.

#### Analysis of Results and Reflection

#### Improvement Actions

Year 2

#### Analysis of Results and Reflection

#### Improvement Actions

Year 3

#### Analysis of Results and Reflection

#### Improvement Actions

Year 4

#### Analysis of Results and Reflection

#### Improvement Actions

Year 5

#### PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 1: Research Best Practices Inservice & Preservice
Unit Objective	PIMSER Objective 1.2: Initiatives to Improve Quality and Effectiveness of pre-service and in-service P-20 teachers
Related Metrics	PIMSER Metric 1.2.1: One externally funded initiative to improve P12 per-service/in-service teacher education
Related Mission Area	Research and Creative Work
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

#### Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

#### Actual Results

##### Data Tables

##### Newly Funded Initiatives-2010-2014

	Pre-service	In-service	Total
2010	2	18	20
2011			
2012			
2013			
2014			

#### Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

Analysis of Results and Reflection	Improvement Actions
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Year 1

The initiatives of the PIMSER units relating to this objective were particularly successful. Many of these projects will continue beyond their initial year of funding.	The PIMSER director and core staff will increase its interaction with STEM-related departmental faculty to increase the number of project proposals.
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Analysis of Results and Reflection	Improvement Actions
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Year 2

Analysis of Results and Reflection	Improvement Actions
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Year 3

Analysis of Results and Reflection	Improvement Actions
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Year 4

Analysis of Results and Reflection	Improvement Actions
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Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 1: Research Best Practices Inservice & Preservice
Unit Objective	PIMSER Objective 1.3: P-20 Innovation STEM lab
Related Metrics	UK Metric 1-11. STEM Degrees Awarded PIMSER Metric 1.3.1 Collaborate on P-20 Innovation Lab
Related Mission Area	Education
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

Assessment Method
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Actual Results
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Data Tables
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Descriptive Results
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Year 1

The STEM Innovation lab within the P20 Innovation lab engaged in at least 7 engagement and outreach activities during the past year.

Year 2

Year 3

Year 4

Year 5

Analysis of Results and Reflection	Improvement Actions
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Year 1

The PIMSER Core Staff and directors of the PIMSER units have successfully interacted with College of Education faculty involved in the formation of centers within the P20 Innovation Lab, thereby increasing the degree of collaboration that will lead to additional engagement and outreach.	PIMSER core staff and unit directors will increase their collaboration with key College of Education faculty and Arts & Sciences faculty to further increase the incorporation of engagement and outreach within the P20 Innovation Lab.
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Analysis of Results and Reflection	Improvement Actions
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Year 2

## Analysis of Results and Reflection

## Improvement Actions

Year 3

## Analysis of Results and Reflection

## Improvement Actions

Year 4

## Analysis of Results and Reflection

## Improvement Actions

Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal PIMSER Goal 1: Research Best Practices Inservice &amp; Preservice

Unit Objective PIMSER Objective 1.4: pre-service education in STEM areas

Related Metrics PIMSER Metric 1.4.1. Increase in STEM pre-service courses

Related Mission Education

Area

Related UK Goal UK Goal 3. Develop Human and Physical Resources

UK Goal 4. Promote Diversity and Inclusion

## Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

## Actual Results

## Data Tables

	# of Pre-service courses	% change
2010	12	baseline
2011		
2012		
2013		
2014		

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

## Improvement Actions

Year 1

The new Core Standards in Math and Science that have, and are, being adopted by KDE have led to greater attention to improvement of the quality of the courses within pre-service education. This is a continuing activity that will affect the development of the next generation of pre-service teachers. This also directly relates to the overall objective of the SMTI.

The overall objective is to continue to improve the quality of STEM pre-service courses as they are developed in the new pre-service curriculum.

## Analysis of Results and Reflection

## Improvement Actions

Year 2

## Analysis of Results and Reflection

## Improvement Actions

Year 3

## Analysis of Results and Reflection

## Improvement Actions

Year 4

## Analysis of Results and Reflection

## Improvement Actions

Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 2: Communicate and Realize P20 Math/Sci Education Reform through Partnerships
Unit Objective	PIMSER Objective 2.1: Communicate Opportunities for Collaborative Engagement Partnerships in STEM
Related Metrics	PIMSER Metric 2.1.1: Inquiry about collaborative engagement will increase 5% over 2010-2014. PIMSER Metric 2.1.2: Increase collaboration between STEM IHE disciplinary faculty, education faculty and P-12 teachers
Related Mission Area	Research and Creative Work
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

## Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

## Actual Results

## Data Tables

	# of Inquiries	% change
2010	147	baseline
2011		
2012		
2013		
2014		

	# of partnerships formed	% change
2010	34	baseline
2011		
2012		
2013		
2014		

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

### Analysis of Results and Reflection

Year 1

A major change was made this year in response to the PIMSER Advisory Board's recommendation that communication should be through each department chair and dean of the STEM related colleges, rather than sole reliance on the PIMSER Outreach Professors. This has been a very successful strategy.

### Improvement Actions

We will form groups of faculty in each STEM area through the department chairs to further facilitate communication to faculty presently not involved in outreach activities.

### Analysis of Results and Reflection

Year 2

### Improvement Actions

### Analysis of Results and Reflection

Year 3

### Improvement Actions

### Analysis of Results and Reflection

Year 4

### Improvement Actions

### Analysis of Results and Reflection

Year 5

### Improvement Actions

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 2: Communicate and Realize P20 Math/Sci Education Reform through Partnerships
Unit Objective	PIMSER Objective 2.2: Communicate value of PIMSER to CPE, education agencies and IHEs in Kentucky
Related Metrics	PIMSER Metric 2.2.1: Increase partnerships between PIMSER & KY education agencies
Related Mission Area	Education
Related UK Goal	UK Goal 2. Promote Research and Creative Work

UK Goal 4. Promote Diversity and Inclusion  
UK Goal 5. Engagement, Outreach, and Service

### Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

### Actual Results

#### Data Tables

	# of Partnerships between KY Ed Organization & Association	% change
2010	23	baseline
2011		
2012		
2013		
2014		

#### Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

#### Analysis of Results and Reflection

#### Improvement Actions

Year 1

This past year the KDE has undergone substantial organizational changes which have affected the funding opportunities and projects of the PIMSER. This has required special attention to communication with the statewide agencies. Continuing changes in organization will require additional means of communication over the next year.

PIMSER intends to hold additional open houses and more attention to the effectiveness of its website. This will include a survey of the potential STEM audiences.

#### Analysis of Results and Reflection

#### Improvement Actions

Year 2

#### Analysis of Results and Reflection

#### Improvement Actions

Year 3

#### Analysis of Results and Reflection

#### Improvement Actions

Year 4

#### Analysis of Results and Reflection

#### Improvement Actions

Year 5

PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 2: Communicate and Realize P20 Math/Sci Education Reform through Partnerships
Unit Objective	PIMSER Objective 2.3: Engage other IHEs and education agencies
Related Metrics	PIMSER Metric 2.3.1: Increase partnerships between PIMSER and National/International IHEs or education organizations
Related Mission Area	Education
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

#### Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

#### Actual Results

##### Data Tables

	National IHE	International IHE	Other Education Organizations	Total
2010	22	1	9	32
2011				
2012				
2013				
2014				

#### Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

#### Analysis of Results and Reflection

Year 1

The STEM engaged faculty, especially including the outreach professors, should be supported to increase their contacts with state and national educational associations, foundations, and other funding agencies. Contacts over the past year have resulted in increased funding and this trend should continue.

#### Improvement Actions

The STEM engaged faculty, especially including the outreach professors, should be supported to increase their contacts with state and national educational associations, foundations, and other funding agencies. Contacts over the past year have resulted in increased funding and this trend should continue.

#### Analysis of Results and Reflection

Year 2

#### Improvement Actions

#### Analysis of Results and Reflection

Year 3

#### Improvement Actions

#### Analysis of Results and Reflection

#### Improvement Actions

Year 4

## Analysis of Results and Reflection

## Improvement Actions

Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 3: Provide Leadership and Support for Mission & Goals of SMTI
Unit Objective	PIMSER Objective 3.1: Prepare The Leadership Collaborative's analytic framework for increasing quality and quantity of math and science secondary education teachers
Related Metrics	PIMSER Metric 3.1.1: SMTI IAP will be completed by December 15, 2010 PIMSER Metric 3.1.2: Identify and commit sufficient funding for meeting goals of our IAP
Related Mission Area	Education
Related UK Goal	UK Goal 1. Prepare Students UK Goal 2. Promote Research and Creative Work UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion

## Assessment Method

Verify that the Analytic Framework was submitted.

## Actual Results

## Data Tables

The Analytic Framework was completed and is currently in use at UK.

Analysis of funding IAP components has not be completed.

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

## Improvement Actions

Year 1

The Analytical Framework is being considered for national use by APLU. UK's president and the UK The Learning Collaborative Leadership Team is planning further evaluation of it.

UK's president and the UK The Learning Collaborative Leadership Team is planning further evaluation of the Analytic Framework.

Meetings are scheduled in December 2010 with The Leadership Collaborative, President of UK, and the national leaders of the SMTI initiative to determine the value of the IAP in STEM education reform. The results of these deliberations will contribute to an understanding of the cost implications of the initiative.

## Analysis of Results and Reflection

## Improvement Actions

Year 2

## Analysis of Results and Reflection

## Improvement Actions

Year 3

## Analysis of Results and Reflection

## Improvement Actions

Year 4

## Analysis of Results and Reflection

## Improvement Actions

Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 3: Provide Leadership and Support for Mission & Goals of SMTI
Unit Objective	PIMSER Objective 3.2: Determine barriers and best practices to achieving goals of increasing quantity and quality of math & science teachers
Related Metrics	PIMSER Metric 3.2.1: Identify common and institution specific barriers to increasing increasing quantity & quality of P-12 math & science teachers in KY PIMSER Metric: 3.2.2: Complete an estimate of KY's need for high school science and math teachers
Related Mission Area	Education
Related UK Goal	UK Goal 1. Prepare Students UK Goal 2. Promote Research and Creative Work UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

#### Assessment Method

SMTI/TLC developed a survey from the IAP to determine the best practices and barriers to achieving the goals of increasing the quantity and quality of math & science teachers. PIMSER will participate in an evaluation of this survey to determine the efficacy of its value as an assessment instrument.

The PIMSER will work with the College of Education to develop a process for determining the Commonwealth's needs of high school science and math teachers.

#### Actual Results

##### Data Tables

The analytical framework for UK has been completed and is now being used to assess the university's readiness to achieve the objectives of SMTI.

#### Descriptive Results

##### Year 1

The analytical framework for UK has been completed. An assessment for assessing the value of the analytical framework has been developed with PIMSER working with the Office of the President.

##### Year 2

##### Year 3

##### Year 4

##### Year 5

#### Analysis of Results and Reflection

#### Improvement Actions

##### Year 1

The analytical framework has proven to be an invaluable instrument in assisting UK in improving teacher education and the preparation of larger numbers and better prepared teachers in KY. Future meetings involving the Office of the President, College of Education and PIMSER will be directed toward the development of a survey instrument from the analytical framework to determine its validity as a tool for assessing the barriers and best practices to achieving goals of increasing quantity and quality of math and science teachers.

#### Analysis of Results and Reflection

#### Improvement Actions

##### Year 2

#### Analysis of Results and Reflection

#### Improvement Actions

##### Year 3

#### Analysis of Results and Reflection

#### Improvement Actions

##### Year 4

#### Analysis of Results and Reflection

#### Improvement Actions

##### Year 5

PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 3: Provide Leadership and Support for Mission & Goals of SMTI
Unit Objective	PIMSER Objective 3.3: Support UK President in National Leadership Role
Related Metrics	
Related Mission Area	Education
Related UK Goal	UK Goal 2. Promote Research and Creative Work UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion

#### Assessment Method

We will keep a record of requests from the President of UK for assistance with his role as chair of the SMTI commission.

#### Actual Results

##### Data Tables

The PIMSER has been successful in meeting the requests from the Office of the President.

#### Descriptive Results

Year 1

PIMSER has responded to each request from the President for assistance and has achieved the goals of the requests.

Year 2

Year 3

Year 4

Year 5

#### Analysis of Results and Reflection

Year 1

The working relationship between PIMSER and the Office of the President on this goal has been successful. It has led to the development of additional perspectives on the SMTI.

#### Improvement Actions

The PIMSER will work closely with the Office of the President to anticipate further needs in improvement of the national SMTI project.

#### Analysis of Results and Reflection

Year 2

#### Improvement Actions

#### Analysis of Results and Reflection

Year 3

#### Improvement Actions

#### Analysis of Results and Reflection

Year 4

#### Improvement Actions

#### Analysis of Results and Reflection

Year 5

#### Improvement Actions

### PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 4: Increase Number of Students Prepared for PostSecondary Math & Science Disciplines
Unit Objective	PIMSER Objective 4.1: Increase the number of P-12 students that take advanced courses in mathematics and science.
Related Metrics	PIMSER Metric 4.1.1: Number of high school students from PIMSER served schools who take advanced math or science will increase by 10%
Related Mission Area	Service
Related UK Goal	UK Goal 1. Prepare Students UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

#### Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

## Actual Results

### Data Tables

Number of High School Students Served By

PIMSER Programs Taking Advanced Mathematics

and Science Course

	# of Advanced Courses Taken	% change
2010	40	Baseline
2011		
2012		
2013		
2014		

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

Year 1

The Partnership Enhancement Projects now funded by the Toyota USA Foundation, the AT&T Foundation and the GE Corporation are now in the process of introducing improved math and science instruction in three schools (2 school districts). Students, as a result of these projects, will be taking advanced courses in 2011. Furthermore, these projects will result in the creation of advanced course offerings.

## Improvement Actions

The quality and quantity of STEM courses in the schools served by PIMSER will be positively impacted by the recently approved STEM Education Department in the College of Education. The faculty of this department are active participants in the PIMSER projects directed toward this goal.

## Analysis of Results and Reflection

Year 2

## Improvement Actions

## Analysis of Results and Reflection

Year 3

## Improvement Actions

## Analysis of Results and Reflection

Year 4

## Improvement Actions

## Analysis of Results and Reflection

Year 5

## Improvement Actions

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 4: Increase Number of Students Prepared for PostSecondary Math & Science Disciplines
Unit Objective	PIMSER Objective 4.2: Increase the number of high level science, technology, engineering, and mathematics courses available to middle and high school students.
Related Metrics	PIMSER Metric 4.2.1: Number of Advanced Courses in PIMSER served schools will increase by %5 per year
Related Mission Area	Service
Related UK Goal	UK Goal 1. Prepare Students UK Goal 2. Promote Research and Creative Work UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

## Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

## Actual Results

## Data Tables

Number of Advanced Course Offerings In Districts

Serviced by PIMSER Units

	# of Advanced Course Offerings	% change
2010	50	Baseline
2011		
2012		
2013		
2014		

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

Year 1

The PIMSER core staff continues to experience difficulty in obtaining critical data from K-12 partners and will have to develop alternative methods, including the state longitudinal database to further this objective. There is no doubt that the adoption of Common Core Math & Science Standards will encourage partner schools to develop more advanced math & science courses that will be available to their students.

## Improvement Actions

Improvement will be facilitated by the university's development of better systems to reward faculty engaged with the K12 STEM community. This is currently a work in progress with the support of the Provost.

## Analysis of Results and Reflection

## Improvement Actions

Year 2

Analysis of Results and Reflection

Improvement Actions

Year 3

Analysis of Results and Reflection

Improvement Actions

Year 4

Analysis of Results and Reflection

Improvement Actions

Year 5

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 4: Increase Number of Students Prepared for PostSecondary Math & Science Disciplines
Unit Objective	PIMSER Objective 4.3: Promote College initiative to increase PD opportunities for P-12 teachers
Related Metrics	PIMSER Metric 4.3.1: Increase number of professional development programs focusing on STEM in PIMSER served schools
Related Mission Area	Overall
Related UK Goal	UK Goal 1. Prepare Students UK Goal 3. Develop Human and Physical Resources UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

## Assessment Method

PIMSER developed a data gathering instrument and distributed it to each of its units and core staff. The results were compiled and reported in the actual results section of this report.

## Actual Results

## Data Tables

Number of Professional Development Programs W/Focus On P12 STEM Improvement In Districts Served By PIMSER

	# Of PD Programs	% change
2010	16	Baseline
2011		
2012		
2013		
2014		

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

Year 1

The success of PIMSER in obtaining funding for professional development outreach projects from foundations and a corporate sponsor has encouraged further development efforts to identify additional support for this objective. UK's Development Office has offered assistance to PIMSER to further this goal. The Provost has recently approved an additional position in PIMSER for identifying funds to increase professional development engagement in the area of physical sciences. This is a strong indication of continuing university support for activities leading to additional professional development.

## Improvement Actions

The PIMSER will work more closely with UK's Office of Development to improve funding for projects involving professional development of in-service K-12 STEM teachers. In addition, the new STEM Education Department will provide research that should lead to better methods and best practices in professional development.

## Analysis of Results and Reflection

Year 2

## Improvement Actions

## Analysis of Results and Reflection

Year 3

## Improvement Actions

## Analysis of Results and Reflection

Year 4

## Improvement Actions

## Analysis of Results and Reflection

Year 5

## Improvement Actions

## PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 4: Increase Number of Students Prepared for PostSecondary Math & Science Disciplines
Unit Objective	PIMSER Objective 4.4: Increase P-12 student achievement in STEM-related courses.
Related Metrics	PIMSER Metric 4.4.1: Student achievement in core math & science courses will increase significantly
Related Mission Area	Education
Related UK Goal	UK Goal 1. Prepare Students UK Goal 2. Promote Research and Creative Work UK Goal 4. Promote Diversity and Inclusion UK Goal 5. Engagement, Outreach, and Service

## Assessment Method

Methodologies developed by the PIMSER Evaluation & Research unit (partially funded by the Research Evaluation Technology Assistance grant) will be used to monitor and measure student achievement in core math and science courses beginning in 2011.

## Actual Results

## Data Tables

Baseline results will be reported in 2011 with comparative results beginning in 2012.

## Descriptive Results

Year 1

Year 2

Year 3

Year 4

Year 5

## Analysis of Results and Reflection

Year 1

## Improvement Actions

The NSF has expressed satisfaction with the methodologies used

Preliminary results of the evaluation methodology have been

for monitoring and assessment of student achievement as indicated by their funding of faculty within PIMSER who have developed these methods. These assessments of student achievement will be linked to databases that will further determine the effectiveness of math and science instruction in schools. This is a very positive step forward in improvement in K-20 STEM education in Kentucky.

evaluated by an external consultant funded by the NSF. This evaluation will be used to determine any improvement that will be needed.

#### Analysis of Results and Reflection

#### Improvement Actions

Year 2

#### Analysis of Results and Reflection

#### Improvement Actions

Year 3

#### Analysis of Results and Reflection

#### Improvement Actions

Year 4

#### Analysis of Results and Reflection

#### Improvement Actions

Year 5

### PIMSER Strategic Plan Implementation, 2009-2014

Unit Goal	PIMSER Goal 5: P-12 Math & Science Unit of PIMSER to Become Self-Supporting through External Grants & Contracts
Unit Objective	PIMSER Objective 5.1: The P-12 Mathematics and Science Outreach Unit will become self-funding by September 30, 2012.
Related Metrics	
Related Mission Area	Service
Related UK Goal	UK Goal 3. Develop Human and Physical Resources UK Goal 5. Engagement, Outreach, and Service

#### Assessment Method

The audit of the budget of this PIMSER unit and the determination of the Provost Budget Office indicates that this objective has already been met.

#### Actual Results

#### Data Tables

#### Descriptive Results

Year 1

Due to the success of this unit in acquiring a large number of grants from state agencies, 100% funding of its staff and operations was achieved in 2010. The projected timeline for 100% funding was September 30, 2011.

Year 2

Year 3

Year 4

Year 5

#### Analysis of Results and Reflection

#### Improvement Actions

Year 1

The achievement of 100% self-funding a year earlier than projected reflects the positive reputation that this unit of PIMSER has acquired due to the success of its previous projects. Many of the programs developed by this unit have been adopted by the KDE and converted into statewide programs. Fortunately, some of these programs are being conducted by this PIMSER unit with new state funding. It is the intent of PIMSER to continue to cultivate both state and national funding agencies to support this important unit of PIMSER.

This goal has been met and improvement will be measured by its success in continuing to maintain self-sufficiency.

#### Analysis of Results and Reflection

#### Improvement Actions

Year 2

Analysis of Results and Reflection	Improvement Actions
Year 3	

Analysis of Results and Reflection	Improvement Actions
Year 4	

Analysis of Results and Reflection	Improvement Actions
Year 5	