

2014 Budget Form – President's Performance Fund

**New Mexico State University
New Initiatives Supporting Vision 2020 Goals and Objectives
For Allocation of President's Performance Fund – Fiscal Year 2013-2014**

Date of Request:	09/17/2013	
Submitted By:	Ralph Preszler	Phone: 646-7366
College or Unit:	College of Arts and Sciences	
Department:	All Departments	
Project Name: (Short description): Center for Peer Learning Assistants		
<input checked="" type="checkbox"/>	Recurring for:	Amount Recurring Funding Requested per year:
	<input type="checkbox"/> One Year	Year 1: \$ 147,218.89: \$120,000 stipends; \$27,218.89 Coordinator Summer
	<input type="checkbox"/> Two Years	Year 2: \$ 147,410.07: \$120,000 stipends; \$27,410.07 Coordinator Summer
	<input type="checkbox"/> Three Years	Year 3: \$ 147,684.99: \$120,000 stipends; \$27,648.98 Coordinator Summer
<input type="checkbox"/>	Non-Recurring	Amount Non-Recurring Funding Requested: \$
Description of request		

A center to provide stable support for the initiation and maintenance of Peer Learning Assistant (PLA) programs throughout the College of Arts and Sciences would improve student learning and increase student success, particularly in challenging lower-division courses. In a variety of departments at NMSU, innovative PLA programs have increased student performance, retention, and timely progress toward degree completion. The addition of PLA’s to instructional teams increases communication between instructors and students. Students who hesitate to ask questions, or seek help, from faculty or graduate assistant instructors may be more likely to work with a PLA. These peer facilitators have the credibility of having recently completed the courses and learned the concepts that freshman and sophomores are currently struggling to master. They remember the challenges and can provide timely help from a perspective that is close to that of the freshman and sophomore students. In addition to helping students learn, they help faculty teach by providing instructors with feedback on challenges that students are facing as they progress through their courses. This diversification of the instructional team maintains diversity of the students body by enhancing communication with students who may otherwise be marginalized in large courses, and by reducing performance gaps between non-URM and URM (under-represented minority) groups of students.

A variety of Departments within the College of Arts and Sciences have independently developed peer instructions programs: Supplemental Instructions in the Department of Chemistry and Biochemistry, and the Department of Physics; the NMSU-HHMI BioCat Program in the Department of Biology; and Peer-Led Team-Learning in the Computer Science Department. We view the diversity of these approaches as a strength that should be maintained. No one program works well when teaching every topic or every group of students. However, a drawback to the independence of these programs is that they are prone to collapse due to interruptions in external or internal support; a second drawback is that the individual programs are focused inward on departmental courses and we are not learning from each others’ successes and failures.

The Computer Science Department has piloted Peer-Led Team-Learning in one of its gateway course (CS 272 – Introduction to Data Structures) for 2 years, with improvement in terms of retention rates (reductions of W grades in comparison to the previous semester ranging from 5% to 10%). Computer Sciences has also embraced a community of Hispanic Serving institutions exploring the use of PLTL in computing – under the NSF-funded umbrella of the Computing Alliance of Hispanic-Serving Institutions (CAHSI), which provides training workshops, sample modules, curricula materials and access to an extensive base of expertise in using PLTL in CS courses.

The NMSU Department of Physics has addressed the need for problem-solving practice by implementing Supplemental Instruction (SI) for calculus-based introductory (first-year) physics courses and other math-intensive physics courses. Coordinated by an experienced instructor, SI offers support to students when they are learning – many for the first time – to apply the mathematical (and often abstract) concepts to problem solving. The emphasis of the SI sessions is on concepts or methods that are difficult for students. Students work cooperatively with the support of the instructor, graduate teaching assistant (TA) or undergraduate learning assistant (LA), rather than facing those difficulties alone while doing homework. Pilot SI courses have been highly successful in reducing the failure rate for students that attend.

The Department of Physics also has developed and taught SI courses for the introductory algebra-based “General Physics for Life Sciences” sequence. During these SI workshops students work

cooperatively on conceptual and quantitative problems designed to foster skill development and to give practice with problem-solving strategies. Supplemental Instruction leaders provide feedback from SI workshops that informs instruction in the regular course, and the SI students help their classmates via peer instruction. The failure rate (grades of W, D or F) in the regular course for students attending SI has been only 10% (average of years 2008, 2010, 2011) compared to 21% for students not attending SI.

The Department of Chemistry and Biochemistry has pioneered the use of Supplemental Instruction at NMSU since the Spring Semester of 2004. The average pass rate of students participating in SI in General Chemistry I and II over the past 9 years is 73.07%; the average pass rate of students in the same courses not participating in SI is 60.05%. In Organic Chemistry, the pass rate of students participating in SI is 75.96% and the pass rate of students not participating in SI is 59.65%.

In the Department of Biology, the BioCat PLA Program has improved student performance in both large introductory biology courses that serve STEM and STEM-related majors (Biology 111 and 211). For example, in seven semesters preceding the introduction of BioCats in Biology 111 only 28% of students earned A’s or B’s; after the introduction of BioCats 41% of students earned A’s or B’s. These increases in student performance, and associated reductions in course withdrawals, were greatest for URM students and for female students. After using assessments of student performance to change the model to better fit the needs of students in their second or third semester, students in Biology 211 experienced similar gains in student performance and persistence.

A Center for Peer Learning would provide stable support for Peer Learning Assistant stipends. Support for 50 PLA stipends each semester, when combined with external support, would allow steady support to maintain existing successful programs, improve existing programs, and help departments develop new programs. This support would be supplemented by, rather than dependent on, external support. A Center for Peer Learning would also increase the ability of faculty to obtain external support by demonstrating institutional commitment, providing assessment data, and by sharing expertise.

In an effort to maximize the proportion of funds that are used to support PLA stipends, we propose supporting a program coordinator through supplementing an existing college-track faculty’s salary with summer support, rather than hiring a full-time coordinator. In the summer, the coordinator would up-date assessment databases, and offer training for both peer facilitators and faculty interested in establishing a PLA program in their department. The PLA Program Coordinator also would organize seminars to provide opportunities for faculty and peer facilitators from different programs to exchange ideas.

The Program Coordinator would be responsible for soliciting PLA proposals from all departments and distributing these proposals to an Advisory Board. Each interested department would be invited to appoint one representative to the Advisory Board. The Board would be responsible for providing guidance to the Program Coordinator, who would be directly supervised by his or her Department Head. The Board would also be responsible for allocating PLA lines to participating departments based on their annual reports and proposals to the Peer Learning Center. The evaluation and hiring of individual Peer Learning Assistants would be done at the departmental level, although the Center for Peer Learning and the Program Coordinator would be available to provide departments with examples of selection processes and guidance in hiring procedures.

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Request Justification	
Support Vision 2020 Goals (select as many Vision 2020 goals as apply below).	
<input checked="" type="checkbox"/>	1. Graduation – Teaching, Learning & Programs - Provide effective academic programs, stellar teaching and learning, and enhanced student engagement to advance highly capable graduates
<input checked="" type="checkbox"/>	2. Diversity – Be a model of student, faculty and staff diversity at all levels
<input type="checkbox"/>	3. Internationalization - Effectively prepare students for a global society
<input checked="" type="checkbox"/>	4. Research & Creative Activity -- Be the catalyst for promoting discovery, encouraging innovation, sparking economic advancement, and inspiring creative achievement
<input type="checkbox"/>	5. Economic Development -- Be a driving force for economic progress in New Mexico
<input type="checkbox"/>	6. Resource Stewardship -- Increase philanthropy and alternative revenue to support teaching, research and service
<input type="checkbox"/>	7. Community - Service, Extension & Outreach -- Be a model for community engagement at all levels through innovative and exceptional outreach activity
<input type="checkbox"/>	Specific objectives: (Complete attached Performance Data Matrix)

Approvals (please print and sign)			
Submitted by	Ralph Prezler		9/12/13
	Print	Signature	Date
Director/ Department Approval	Ralph Prezler		9/12/13
	Print	Signature	Date
College Dean/ Division VP Approval			9/27/13
	Print	Signature	Date

Internal Use Only				
University Budget Committee:	Tier Assignment:	<input type="checkbox"/> Tier I	<input type="checkbox"/> Tier II	<input type="checkbox"/> Tier III
	Ranking No.:	_____	Date:	_____
Comments:				
President’s Academic Council:	<input type="checkbox"/> Approved	<input type="checkbox"/> Disapproved	Date:	_____
	Comments:			

2014 Budget Form – President’s Performance Fund, supplement

**New Mexico State University
New Initiatives Supporting Vision 2020 Goals and Objectives
Performance Data Matrix
Fiscal Year 2013 - 2014**

The Vision 2020 Strategic Plan provides goals, objectives and key performance indicators for the University. Using the goal(s) you have check marked on the request form, please indicate which of the stated objectives this request is projected to positively impact, how the request is tied to the selected objective and propose a performance measure(s). Then indicate the target performance improvement goals over an annual timeline not to exceed three (3) years. Add rows as needed.

All Presidents’ Performance Fund awards are subject to annual review of comparative performance as a condition of continuing award. The required conditions of continuing funding will be identified at the time of award from the President’s Performance Fund.

Goal Number	Vision 2020 Objective	Explain how request is tied to this objective	Performance Measure	FY2013-2014 Target	FY2014-2015 Target (if applicable)	FY 2015-2016 Target (if applicable)
1	Graduation—teaching, learning, and programs	Peer learning assistants have been shown to improve grades, and therefore progress toward degrees of students at NMSU	Improvement of student grades in courses with PLAs in comparison to the same courses prior to the introduction of PLAs.	5% increase in percent of students earning A’s and B’s; 5% decrease in the percent of students earning D’s and F’s.	10% increase in percent of students earning A’s and B’s; 10% decrease in the percent of students earning D’s and F’s.	15% increase in percent of students earning A’s and B’s; 15% decrease in the percent of students earning D’s and F’s.
2	Graduation—teaching, learning, and programs	Peer learning assistants have been shown to reduce course withdrawal rates, and therefore progress toward degrees of students at NMSU	Reduction of course withdrawals in courses with PLAs in comparison to the same courses prior to the introduction of PLAs.	10% reduction in W’s	15% reduction in W’s	20% reduction in W’s

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3.	Graduation— teaching, and learning, and programs	Peer Learning Assistants allow students to discuss their understanding with PLA’s and by doing so improve their ability to synthesize and apply key concepts.	Assignments and/or exams in courses with PLA’s will gradually increase the proportion of questions that expect students to synthesize, apply, and critically evaluate key concepts.	In the first year that a course implements PLA’s, we do not expect to see a significant change in the nature of assignments.	In the 2 nd year, we aim for a 5% increase in the percent of assignment/exam questions that expect students to think at these higher levels.	In the 3 rd year, we aim for a 7.5% increase in the percent of assignment/exam questions that expect students to think at these higher levels.
4.	Research & Creative Activity	An NMSU Center for Peer Learning would provide an opportunity for collaborative research projects to investigate the transferability of peer learning models across disciplines.	Number of publications and creative works.	5 inter- departmental NMSU workshops to discuss peer learning strategies.	Continuation of workshops and 1 publication.	Continuation of workshops, 1 publication, & 1 national presentation.
5.	Diversity	Peer Learning Assistants better reach students who are marginalized in a more standard course because these students are more willing to work with a PLA.	Reduction in ethnicity- based or gender-based performance gaps, if they exist in a course.	5% reduction	10% reduction	15% reduction