

Testimony to the U.S. Senate Committee on Health, Education, Labor and Pensions

Prepared Testimony of Mari Koerner, Ph.D., Professor and Dean of the Mary Lou Fulton Teachers College, Arizona State University

Chairman Harkin, Senator Alexander and Members of the Subcommittees, thank you for inviting me to talk with you about teacher preparation.

Much of what we do at Arizona State University is guided by a vision of an activist President, Michael Crow and the compelling charge to make the world a better place. We take pride in our students. Often children of families who have struggled to create a path for them to go to College, they are the first college bound generation and ASU is their “dream” school. Without hyperbole, they are living proof of the American Dream. Our students aspire to become teachers and see teaching as a life-long profession. President Crow’s vision is compelling and serves as a charge for our College:

To establish ASU as the model for a New American University, measured not by who we exclude, but rather by who we include and how they succeed; pursuing research and discovery that benefits the public good; assuming major responsibility for the economic, social, and cultural vitality and health and well-being of the community.

Many teachers come from working class families and teaching becomes a way for them to enter middle class. I am one of those stories; child of an Italian immigrant who only finished 8th grade and yet had a daughter move through public education to receive a doctorate and become a dean of a College in a top notch university. I went to Chicago Public Schools and the University of Illinois at Chicago. And then became a teacher through what would now be called an “alternative route.” Even though I was always successful academically and graduated from College, through double promotion, at 19 years old, I can say with confidence, I had no clue how to teach. Perhaps the reason I value what we do in Mary Lou Fulton Teachers College is because I had to learn the hard way-through trial and error-while the students in my classrooms waited for their teacher to get to be just even good enough.

I take great pride in who we are and what we do at ASU. I cannot emphasize enough that we have the full support of the President, the Provost and Deans of all the other Colleges. I have never been told to “slow down,” “take it easy,” “what are you doing!” And because of that, our College has built on a strong history of teaching, service and research to prepare the best teachers and researchers, fulfilling our mission: “to be a constructive force in education” which sets a “new standard for teaching, discovery and innovation.” We have built, in my opinion, the College of the 21st Century where research guides what we do but does not slow us down. Where “scaling up” is necessary because why would we do pilots when only a few of our students could get the best practices? And where we understand making mistakes means you are moving beyond discussion to action. We realize we need a lot of people as partners, including and especially the Federal Government and their resources because we have a track record of leveraging those funds to make systematic reform in our teacher education programs.

Mary Lou Fulton Teachers College at Arizona State University, an RU/VH (research university with very high research activity), is ranked #18 by U.S. News and World Report. As one of the largest colleges of education in the country, our teacher education program has about 3200 undergraduates and 600 graduate students. In addition, the College also has about 2200 graduate students in master’s degree programs, an Ed. D. program and Ph.D. programs totaling 6000+ students.

A Brief History

Our history is part of who we are and the very identity of the entire University. Here is a brief timeline which shows the cultural and core importance of our college to the university.

1886: Arizona State University was founded as a Normal School in the Territory of Arizona, the first institution of higher education in Arizona, and was established to train public school teachers and also teach “husbandry” (agriculture) and the mechanical arts.

1925: The Normal School, with 41 faculty members and 672 students, became the Tempe State Teachers College with the power to establish a four-year college curriculum offering a Bachelor of Education. A two-year curriculum was also offered, leading to a diploma to teach in Arizona elementary schools, and an additional two years earned a Bachelor of Education degree.

1928: The Bachelor of Arts in Education was authorized. Students completing a four-year course were eligible for graduate work in education at a university, and would receive secondary certificates permitting them to teach in Arizona high schools. The requirement for diploma and grade school teaching certificates increased to a three-year curriculum.

1958: The people of Arizona voted two-to-one on a state ballot proposition changing the name of the institution to Arizona State University. The College of Education was one of the four core colleges of the university

2009: The College of Teacher Education and Leadership (CTEL) and the School of Education Innovation and Teacher Preparation are merged along with all of the teacher preparation programs at Tempe, encompassing all initial teacher certification (undergraduate and graduate). Already having programs on the Downtown Campus, CTEL now had programs on four campuses.

2010: The College of Teacher Education and Leadership and The Mary Lou Fulton Institute and Graduate School of Education merged to impact education locally, nationally, and globally and were re-named The Mary Lou Fulton Teachers College, the College we are now.

These are our current demographics of our students:

Undergraduate	
American Indian/Alaska Native	87
Asian	98
Black/African American	118
Hispanic/Latino	696
International	17
Native Hawaiian/Pacific Islander	7
Two or More Races	81
Unspecified	21
White	2030
Grand Total	3155

Teacher Education Program Today

Over the last decade, we have implemented, studied, and scaled a rigorous model of teacher preparation that can be replicated nationally. One of our main goals in improving our teacher preparation program was to increase the rigor of our coursework, which included adding more mathematics, science requirements and humanities (especially for elementary majors). In the past, students were required to take only 1 upper division math course (a methods course), and three lower division courses - two of which were focused on mathematics pedagogy and not content.

Often the issue of articulation with community colleges is overlooked. But, approximately 60% of our undergraduates transfer from community colleges. There are 11 community colleges from which most of our transfer students come. It is very important that we collaborate with the community colleges, especially regarding curriculum. We have little control of the curriculum or instruction the transfer students receive in their first two college years, so a major part of our college's undergraduate transformation involved maintaining open lines of communication with the community colleges.

Five years ago we embarked on a process of revising lower division (100-200 level) course work for our teacher preparation program (funded by TQE grant). Most of the community colleges participated in this process that resulted in 40 new courses, many of which are now a part of our and the community colleges' required curriculum. As a result, our college and many community colleges now have a number of courses that are substantially identical, making transfer from community colleges to ASU much more streamlined. Mathematics, however, was the area that proved to be the most difficult to align between the community colleges and our college.

The community colleges, math faculty from Arts and Sciences, as well as MLFTC faculty collaborated to design the new required mathematics courses. This took a lot of relationship and trust building. The new courses are aligned with the Common Core and research-based best practices for teaching mathematics. Even though some community colleges helped design the courses, there was significant resistance to adopting them for their own programs. The new courses are more difficult than the old courses and they do not have a pedagogical component - they are content only. We at ASU were persistent in communicating our vision for elementary teachers who are prepared to teach math to serve 21st Century needs. We conducted meetings with the community colleges, visited the community colleges, met informally as well as formally, and met with mathematics leaders from the other state universities to demonstrate the need for changes to math curriculum for teacher preparation. We also extended our hand to help the colleges revise their courses. We listened to their concerns and made some revisions to the courses based on their insights. The community colleges eventually adopted our vision for mathematics and have started to revise their courses to align with ours. The result of our collaborations with the community colleges concerning their curriculum is a generation of new teachers who are more equipped to teach mathematics than previously, especially at the elementary and middle school levels in Arizona.

In addition, we made changes to our required science curriculum. The Dean of College of Liberal Arts and Science and I agreed to work together to revise the general education science courses to have them be more appropriate to what PreK-8 teacher will teach. The collaborative nature of this process has been challenging. I quickly realized that it was a revelation to the scientists that there were "standards" that teachers actually had to engage. ASU is not unique in this respect—it's a challenge to get scientists anywhere to look beyond the lab. But as a result of building these courses, our scientists at ASU are now much more aware of what happens in K-8 and much more interested in looking at undergraduate science education as part of a continuum of learning. Framing our courses with the standards helps us reinforce that we are building on the good, important work being done at the K-12 level. The great thing about our courses is that they both reorient undergraduate science education and, thus, extend the continuum of science education, take steps to enhance the impact of K-8 teachers earlier in that continuum.

We ended up with Reforming Science Education for Teachers and Students (ReSETS) initiative is a unique collaboration of world-class research scientists from ASU's College of Liberal Arts and Sciences and science education and curriculum experts from the Mary Lou Fulton Teachers College. ReSETS builds on the recognition that the quality of local, state, and national policy, as well as the vitality of future science innovation, relies on our ability to grow better non-scientists. ReSETS is developing new science courses geared toward building science literacy in non-science major undergraduates, in general, and better serving the needs of preservice teachers, in particular. The courses break with the traditional discipline-based model of general education in a number of key ways.

ReSETS serve as a model and include:

- Transdisciplinary focus
- An exploration of the connections and concepts that cut across the natural sciences.
- Stress the nature of science and science process skills, rather than disciplinary minutiae, is stressed.
- A linkage to emerging state and national science standards, such as the Common Core and the Next Generation Science Standards.
- Utilization of new tools to increase student engagement and assess science literacy (examples: Digital labs and Science Literacy Concept Inventory)

These design features make ReSETS courses stress science as a way of knowing and reducing the unknown. Such a framework better serves future K-8 teachers, who need to impart the nature of science and science process skills within a standards-based context. It also benefits non-science major undergraduates for whom general science literacy is crucial to functioning as informed citizens in today's global community.

In addition to ReSETS, all majors are required to take a new course, Sustainability Science for Teachers. This course was designed in collaboration with the School of Sustainability. Our Nobel Prize winning scientist, Dr. Lee Hartwell, designed the course; He and his team work with MLFTC faculty in teaching it. In the course, students learn about sustainability science content while grappling with global issues involving water, food, fuel, and other real issues facing the world at large. It is geared toward giving undergraduate teaching candidates the necessary knowledge and skills related to the challenges of improving human health and wellbeing while reducing human exploitation of natural resources. It is offered in a hybrid format - half of the class is delivered online, while the rest is delivered in the traditional face-to-face format.

Bringing in the School of Nursing, another addition to our curriculum is a Health Literacy course. Faculty in education and nursing created this course collaboratively. The course requires education majors to examine issues in health, nutrition, exercise, and healthy living. Like the sustainability course, it is delivered in an online format.

Collaborations among our college, the community colleges, the other state universities, and other colleges in ASU (especially arts and sciences) were necessary. We believe it takes a whole university and partners to create excellent teachers.

Year Long Residency-iTeachAZ and TQP

The college has a long history of leveraging federal grant funds to make systematic change in the way it prepares future teachers. In 2004, the college was awarded a \$9.97 million "Teacher Quality Enhancement" (TQE) grant called PDS TENET from the US DOE.

The objectives of the TQE grant were to:

- Objective 1: Recruit, prepare, and retain high-quality teachers in 7 high-poverty urban and remote districts in Arizona using a Professional Development School (PDS) model.
- Objective 2: To ensure high-quality teaching and increased student achievement in these districts.

In 2009, Teachers College was awarded a \$34 million "Teacher Quality Partnership" grant called PDS NEXT. To prepare teachers in school districts using the Professional Development School model where students spend their entire teacher preparation program in a school district taking courses while simultaneously completing clinical experiences. While the TQP award was welcomed by the college, we soon realized that we needed to reexamine both our grant-funded and college programs with the goal of creating one college-wide program built upon the strengths of each and the needs of the preservice teachers we serve. I want to be very clear that TQE was the driver behind thinking about everything we do in teacher education. Once we started to integrate it into our College, it was like a Dominoes game:

Improving clinical experiences meant we had to think about improving content which meant we had to have positive relationships with Arts and Science faculty, which meant we had to recruit students differently and on and on.

By the fall of 2010, college leadership and faculty had agreed on the components of our reformed teacher preparation program. Utilizing key learnings from the TQE PDS TENET grant and initial findings from the PDS NEXT grant, we redesigned our teacher preparation program in a way that met the mission of the Mary Lou Fulton Teachers College and the students it serves, the needs of our school district partners and the students they serve, the knowledge and research of our respected and internationally recognized faculty members, and the vision of ASU, the New American University, which encourages entrepreneurship and innovation.

iTeachAZ began in 2010 with a pilot of 30 students in 3 school districts. By the fall of 2011, we expanded iTeachAZ to include 436 students in 189 schools across 28 districts, many of which educate Arizona's most underserved students. We now have 589 students in 130 schools across 29 districts.

The signature component of iTeachAZ is a Senior Year Residency. The Senior Year Residency (SYR) fully integrates coursework and apprenticeship without increasing the amount of time it takes to earn a bachelor's degree. During the SYR, Teacher Candidates spend four days each week in prekindergarten through 12th grade classrooms and one day completing pedagogy courses delivered at partner schools. Full-time, tenured and clinical faculty members deliver these courses at the school site with the intent of providing Teacher Candidates with just-in-time opportunities to draw meaningful connections between their daily work in P-12 classrooms and the latest in education theory and research.

The rapid scale-up of the iTeachAZ model required leveraging grant and college resources, engaging and training faculty in the new model, changing the ways in which we partnered with local school districts, and securing additional financial support for our teacher candidates so they could participate in the rigorous new program which required them to complete a full-time, forty plus hour per week senior year residency prior to graduation. It required a commitment to challenge the status quo in teacher preparation, a license to innovate, an entrepreneurial spirit, and renegotiating university school partnerships with the focus on preparing a better brand of educator; one who can face the challenges of educating diverse groups of P-12 students in Arizona's schools and beyond.

The iTeachAZ model is designed to capitalize on the opportunity of having multiple adults in the room by having Teacher Candidates act as co-teachers in the classroom, under the guidance of highly qualified mentor teachers. With two adults working together in the classroom prekindergarten through 8th grade students are afforded more opportunities for individualized attention, which will ultimately boost the achievement rates of Arizona's school students. We are now expanding to secondary programs.

Teacher Candidates begin their SYR when new teachers in the district report for duty and follow the district calendar for the remainder of the year. The SYR experience is designed to provide Teacher Candidates with an opportunity to experience the rhythm of a full school year while learning the range of professional responsibilities inherent to the teaching profession. While in the classroom, Teacher Candidates work with Mentor Teachers who have undergone an application process, are selected by both the school and university, and complete special training in coaching and mentoring student teachers. In addition to co-teaching with mentor teachers and taking pedagogy courses, Teacher Candidates participate in district sponsored professional development, faculty meeting, professional learning communities, parent-teacher conferences, and school-wide events such as open houses, athletic competitions, and musical performances that occur after school hours.

Collaborative supervision and mentoring are hallmarks of the iTeachAZ program. During the senior year residency, ASU faculty, mentor teachers, district specialists, and administrators work together to prepare program graduates to be effective teachers who focus on student achievement and ultimately, remain in the teaching profession. Figure 1 shows the organizational structure of all iTeachAZ

partnerships. As illustrated, achievement of P-12 students is central to all activities undertaken by the partners. Together, the components of the iTeachAZ partnership ensure a dynamic environment for teaching and learning which is responsive to the needs of all participants.

iTeachAZ Partnership Model

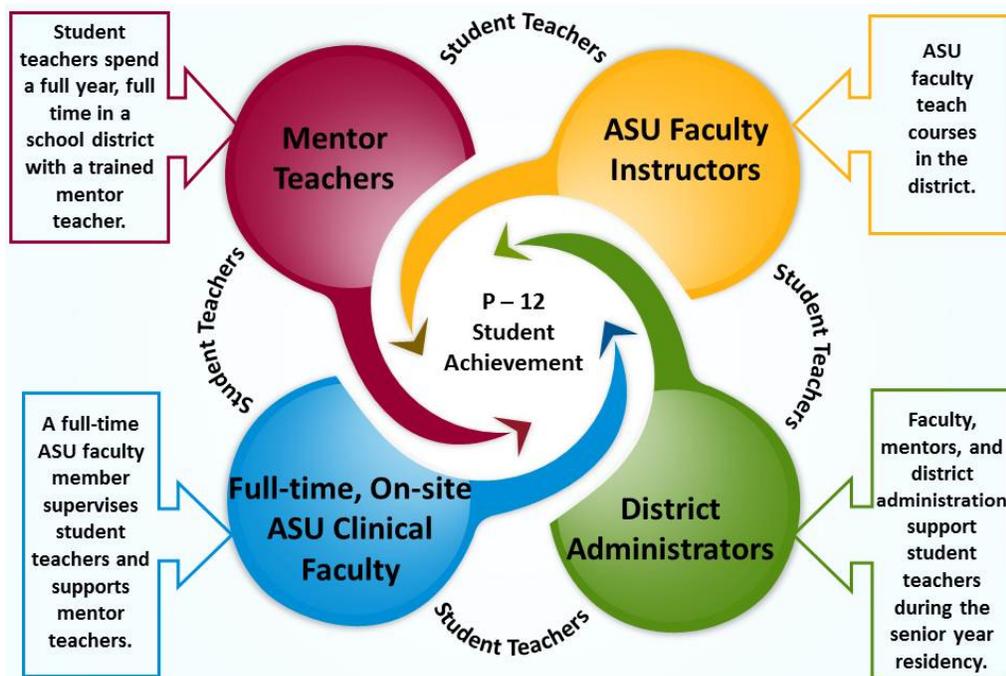


Figure 1. iTeachAZ Organizational Structure.

We see districts as full and responsible partners. School districts provide Teachers College with a district liaison, an on-site classroom in which Teacher Candidates complete coursework and highly qualified mentor teachers to support 25 to 30 Teacher Candidates per year. The role of the iTeachAZ Mentor Teacher is to serve as a coach who models and plans effective best teaching practices, creates a supportive classroom environment where Teacher Candidates are encouraged to take risks, and observes and provides specific feedback to Teacher candidates to ensure the preparedness of Teacher Candidates who enter the teaching profession as highly effective, reflective teachers. Mentors benefit from the partnership by leveraging the opportunity of having additional instructional leaders in the classroom to positively impact student learning. Additionally, mentor teachers hone leadership, coaching, and supervisory skills while hosting Teacher Candidates.

Teachers College provides a full-time, on-site faculty member, known as a Site Coordinator, who works in the district supporting both Teacher Candidates and mentor teachers. The iTeachAZ coordinator teaches two courses, supervises 25-30 Teacher Candidates, serves as the college liaison for the partnership, and provides support to the mentor teachers involved in the program. Furthermore, Site Coordinators host quarterly governance meetings with district administrators to provide program updates and discuss ways in which to enhance the partnership. While the members of the Governing Board vary in each iTeachAZ partnership, the general make-up of iTeachAZ Governing Boards include the Site Coordinator, the district Superintendent or designee, a district Human Resource specialist, and principals of mentor teachers hosting Teacher Candidates.

In addition to hosting Governing Board meetings, Site Coordinators also hold monthly meetings with mentor teachers and ASU faculty. These meetings focus on data talks where ASU faculty and mentor teachers work together to evaluate Teacher Candidate progress. Mentors also receive professional development on self-selected topics of interest to support their work with both Teacher Candidates and P-12 students. District partners compensate the mentor teachers for participating in the partnership and professional development opportunities provided by Teachers College faculty. Teachers College

provides mentor teachers with a six-credit tuition waiver which may be used as payment for any course offered by ASU's 15 colleges.

During the SYR, Teacher Candidates participate in a consistent cycle of observation, feedback, and coaching by ASU Clinical faculty and highly qualified mentor teachers. Each iTeachAZ Teacher Candidate is observed and evaluated four times per year by ASU faculty, using eight domains from the TAP *Teaching Skills, Knowledge and Responsibilities Performance Standards Rubric* (National Institute for Excellence in Teaching, 2013). Each of the indicators on the TAP rubric is scored from 1 to 5, with 1 indicating unsatisfactory performance, 3 indicating proficient performance, and 5 indicating exemplary performance.

This rigorous competency-based evaluation process is different from those used in traditional teacher preparation programs. All teacher candidates are required to reach proficiency (i.e., score of 3) in all indicators in order to successfully complete the program. If a teacher candidate is not making progress toward proficiency in the first semester of clinical experiences, the site coordinator, mentor teacher, and teacher candidate work together to develop and implement an intervention plan to support the teacher candidate's development. If a teacher candidate does not demonstrate proficiency by the end of the second semester, he or she will be given the option to repeat the residency or transfer to the college's non-certification *Educational Studies* program.

The SYR, new curriculum, and close partnerships with community colleges and multiple school districts across Arizona have all been a departure from the way ASU previously educated teachers. As a result of our bold initiative, the Mary Lou Fulton Teachers College is being recognized as a leader in educational reform. *Education Week* featured iTeachAZ in an article in fall 2011 (http://www.edweek.org/ew/articles/2011/11/16/12azteach_ep.h31.html), and in a recent review of 2,420 teacher preparation programs across the country, NCTQ awarded iTeachAZ four out of four stars for our reformed student teaching experience (http://www.youtube.com/watch?v=u_Tw_ki0kks). Additionally, faculty and administrators from 20 colleges of education, each accompanied by school district administrators, have visited Teachers College to learn about the components of the iTeachAZ program. This includes the Iowa's Department of Education which is providing funding for teacher prep programs willing to adopt our residency program. These universities look to iTeachAZ as a model for reforming their teacher education programs to address the challenges of preparing teachers to educate who can meet the needs.

Examples of Innovative Practices

Quest2Teach is a series of game-infused virtual learning environments unified by a social-professional network, designed specifically for teacher education as a means to bridge between educational theory and its application in the field. In Quest2Teach (Q2T), future educators engage their virtual personae in authentic teaching practices, making continual decisions with immediate individualized feedback, with the ability to fail safely, play again, and achieve success in their personalized narrative as the protagonist. In-game meters and analytics are fed back into the larger professional network to evolve their real-world identity across semesters and student teaching, leveraging badges and gamified achievement layers in order track, validate and inspire real world reflection and collaborations with digital colleagues, locally and internationally. Quest2Teach is the first of its kind in the practice of teacher education, and created in-house at the Mary Lou Fulton Teachers College (MLFTC) through a unique collaboration of Learning Scientists, Faculty, and our partner game-design studio. Design-based research with hundreds of MLFTC students has shown significant learning and engagement gains in Q2T. Moreover, students report an increased sense of confidence in their teaching, higher fluency in being able to discuss and engage in these practices, and learning how 'to actively do' (rather than 'know about') these theories in practice. Quest2Teach was recently awarded ASU's President's Award for Innovation, and was also selected and filmed by the Joan Ganz Cooney Center (Sesame Workshop) to be featured in their upcoming documentary of innovative teaching practices.

Sanford Inspire Program (SIP) at Mary Lou Fulton Teachers College has also leveraged private funds in our reform efforts. The Sanford Inspire Program has developed innovative ways to attract, prepare, and support excellent teachers. We have developed new messages and practices for reaching out to an expanded pool of high school students to share information about careers and leadership opportunities in the field of education. The Sanford team collaborated with faculty to design resources including a collection of protocols used by instructors to help teacher candidates make the important connection between what they learn in courses and what they do in their classroom placements. The Sanford team has also supported college-wide efforts to increase the rigor and relevance of clinical experiences. This includes redesign of field experience courses and creation of training for mentor teachers who play a significant role in the development of our new teachers. The Sanford Inspire Program has created dozens of resources to support teacher candidates in their coursework, all of which are available to other programs via the Professional Learning Library. The team is now working to create online resources that will allow school leaders and teacher educators to provide differentiated professional development to teachers to support continuous improvement. While funding for this work came from a private donor, all efforts are integrated with the college and will be sustained once funding has ended.

TQP (TEACHER QUALITY PARTNERSHIP) at MLFTC in 2014 with Sustainability

The TQP grant (currently in Year 5 of 5) includes the following 3 objectives:

- Increase the subject-area competency of ASU-prepared teachers through the reform of 40 lower-division subject area courses as part of the Teaching Foundations Project.
- Increase the clinical competency of 600 ASU-prepared teachers through the iTeachAZ model (year-long student teaching residency, clinical faculty housed at school sites, a rigorous performance assessment process, co-teaching model, professionalism rubric)
- Work with partner districts and the National Institute for Excellence in Teaching (NIET) to turn around at least 25 historically struggling partner district schools in 9 districts and create sites of exemplary teacher preparation in hard-to-staff communities.

Due to federal cuts to education spending, the TQP grant was significantly reduced over the 5 year period (receiving only \$24.7 million of the planned \$34 million). Despite this challenge the project has met or exceeded its objectives in the following ways:

- The project not only implemented reformed teacher preparation for *9 original grant partners*, but created a model that is now being used for all undergraduate teacher preparation programs at Mary Lou Fulton Teachers College. The project expanded its partnerships *from 9 urban and rural partner school districts to 28 partner districts across the state of Arizona*. The project exceeded its goal of training 600 teachers and has currently trained more than 1500 exemplary new teachers through the rigorous residency-based teacher preparation model
- The project developed the iTeachAZ Data Dashboard and Mobile Data Collection App that provide accurate, timely data regarding teacher candidate performance. This dashboard system is a model for other teacher preparation programs.
- Developed the Professional Learning Library (www.pll.asu.edu), an online resource center that provides resources to in-service teachers, ASU instructors, mentor teachers, and teacher candidates aligned to the iTeachAZ model. The PLL also serves community partners, district partners, and other agencies.
- Implemented the Teacher Assessment Performance (TAP) rubric to evaluate all of our candidates.

I cannot emphasize the impact of the federal government role in the success of our programs. Not only have the additional resources been important, the ideas and plans we have had to implement, the support of the program officers, the need to bring in other thought partners has helped define our reform efforts. I have planned to sustain the grant resources by slowly moving positions into College budget lines and extending the impact by finding ways to keep many of the personnel in their roles.

EVALUATION of Program and Students

The TAP rubric, used with in-service teachers as part of the Teacher Incentive Fund (TIF) grant does appear to be an important contributor to and a valid measure of teacher influence on student achievement and their decision to remain at their school. As a result, we use a modified TAP rubric as a tool to measure effectiveness during the senior year residency, and as a potential predictor of future effectiveness once in a classroom. Overall, TAP scores of iTeachAZ teacher candidates are impressive, with students in their final semester typically scoring what veteran teachers in TIF schools score.

- When comparing observation scores, teacher candidates show teaching skills comparable to veteran teachers. Specifically, scores on Instructional Planning and Activities/Materials were almost identical (teacher candidates, N=489, compared to experienced teachers, N=1442).
- During their senior year residency, MLFTC teacher candidates achieved an average score within the Proficient range on each of the eight performance indicators measured by the TAP rubric.

Teacher candidates, on average, have an overall observation score of 3.17 which is higher than the overall average of 3.04 for in-service teachers (N=1,669) in a related ASU grant.

We have systematically worked within ASU and community colleges throughout the state of Arizona to increase rigor in freshman and sophomore level classes. Effective in Fall, 2011 we have strategically reformed 147 classes in English, Math, Science, Social Studies, and the arts. Over 2,500 students have been impacted by these classes that strive to increase content knowledge in core areas for future teachers.

We use several strategies to gain information about the performance of our students post-graduation including (a) our graduates' performance on state certification tests, (b) value added statistical analyses of our graduates' student achievement, (c) career ladder progression, and (d) principal perceptions of our graduates as compared to a state average.

The most recent AEPA scores indicate that 98.5% of our teacher candidates achieved proficiency and became eligible for Arizona certification. Our graduates' pass rate was higher than the state average in Social Studies and equal to the state average in Elementary Education, English, Art, Music, Special Education, and Secondary Professional Knowledge. Scores of the Secondary Professional Knowledge assessment, revealed that the pass rate of ASU teacher candidates was slightly higher than the state average.

Recently the Arizona Department of Education asked 1,200 principals to evaluate their beginning teachers on a variety of essential teaching skills. As can be seen in Table 1, our graduates outperformed the state average on every indicator.

Table 1
Percent meeting or exceeding principal expectations for beginning teachers (n= 1,197)

Item	ASU	Arizona
Demonstrates in-depth knowledge and understanding about the subject(s) he/she teaches	87.8	86.4
Creates a classroom environment conducive to student learning	83.5	81.9
Designs lessons aligned to the academic standards	88.5	86.3
Implements research-based learning theories and instructional strategies	80.0	77.8
Uses a variety of developmentally appropriate strategies to engage students in their learning	80.7	78.6
Uses a variety of appropriate strategies to support literacy development	79.1	78.3
Effectively integrates technology into instruction to support student learning	80.3	78.9
Incorporates English Language Development (ELD) standards into instruction	74.0	72.7
Uses multiple methods for assessing student learning	82.9	81.5
Differentiates instruction to meet the learning needs of all students	75.5	73.9

Note. 63% response rate.

In 2011-2012, 556 (67.3%) Teachers College graduates served in 318 AZ Title I schools, which is 26.0% of the total AZ Title I schools (according to the 2012 ED Facts State Profile for Arizona released by the US Department of Education).

In other words, there is a recent MLFTC graduate employed in approximately one out of every four Title I schools in Arizona.

The Arizona Department of Education projects that new high school requirements have led to a state-wide shortage in math and science teachers. The Mary Lou Fulton Teachers College has responded to this challenge by producing 126 certified or licensed secondary math and science teachers during AY 2011-2012 alone. As illustrated in the graphs below, our math program enrollment has seen an 11 fold increase from 2007 to 2012 and science program enrollment has seen even more growth, with an 86 fold increase from 2007 to 2012.

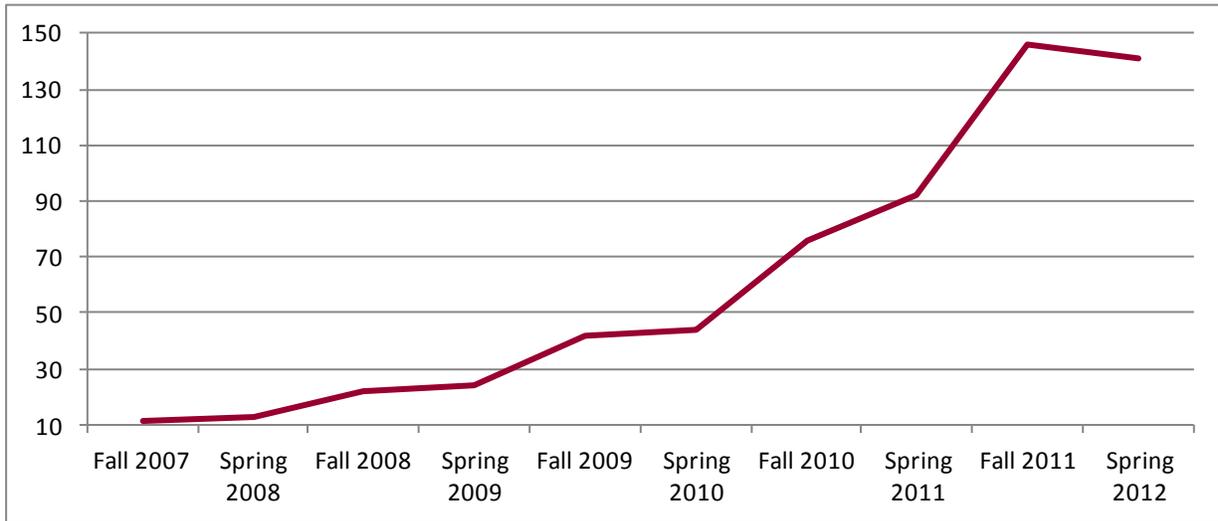


Figure 1. ASU Teachers College students enrolled in a math program.

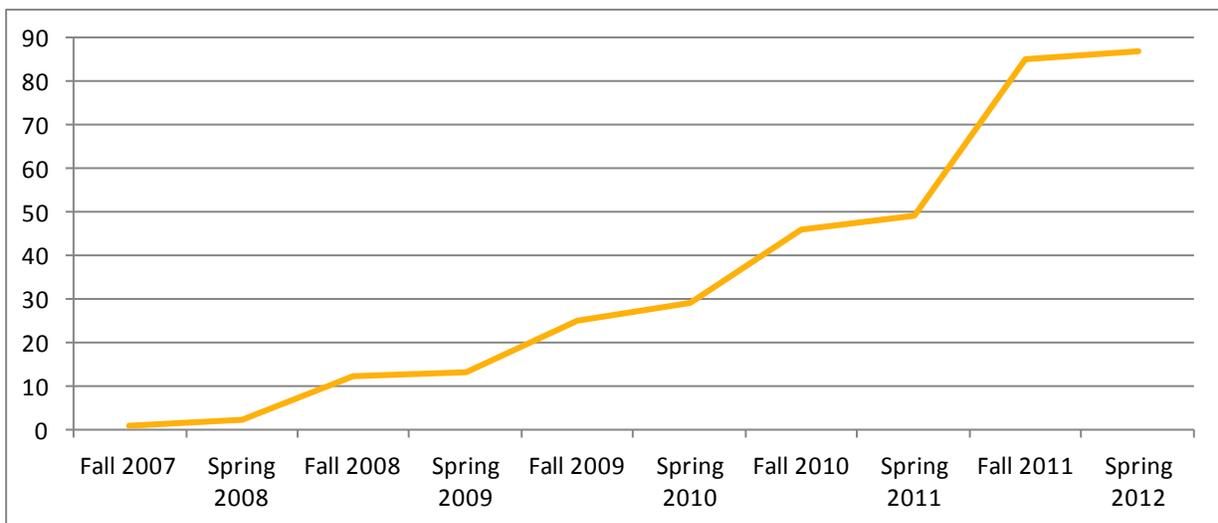


Figure 2. ASU Teachers College students enrolled in a science program.

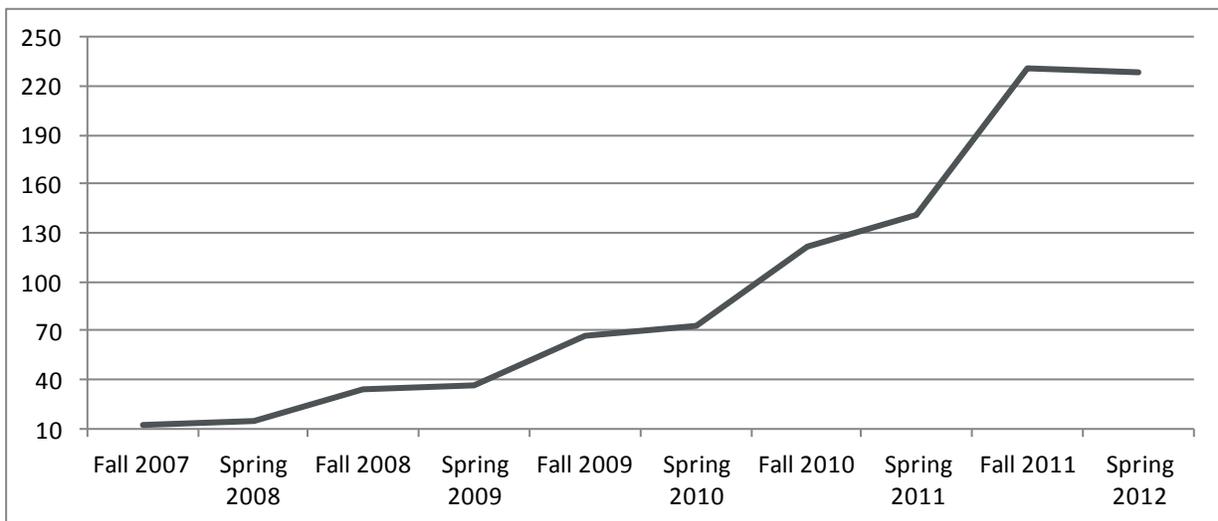


Figure 3. ASU Teachers College students enrolled in a math or science program.

RECOMMENDATIONS for TQP

Based on our experience in leveraging federal funds to reform the largest teachers college in the nation, we do have recommendations for improvements to the Higher Education Act to help institutions of higher education strengthen their teacher preparation programs:

1. Emphasis on institutionalization and sustainability requires
 - a. Evidence of “buy-in” from the university president, chief academic officer, dean and other colleges.
 - b. Plans to scale the model within a given timeframe.
 - c. Articulation and demonstration of how the grant funds will include college faculty and administrators in the structure of the project and in the curriculum redesign.
2. Integrate with existing academic programs and their faculty to achieve program quality and maximize grant impact.
3. Include undergraduates in “residency” programs because currently the federal government only allows stipends for graduate students.

MLFTC has worked through obstacles to improve the lives of children in schools all over the state. There are many lessons learned.

They include:

1. Using TQP to scale up rapidly with no excuses
2. Some people don't want to be part of a reform effort so they chose to do other things
3. Team effort is not a slogan but a necessity
4. This work has become more difficult with the de-professionalization of teachers
5. We are fortunate to be teachers

Appendices attached

PowerPoint 1. Review of iTeachAZ grant

PowerPoint 2. Review of iTeachAZ program