

NC STATE UNIVERSITY

College of Education

FY11 Annual Report

June 2011

College Mission: *The College of Education is a voice of innovation for learning across the life span. We prepare professionals who educate and lead. Our inquiry and practice reflect integrity, a commitment to social justice, and the value of diversity in a global community.*

College Vision: *To be a nationally ranked, research-intensive, professional college of education with distinction for work in teaching and learning in technology-enabled environments.*

Submitted by

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CHANGES IN SERVICE ENVIRONMENT

Leadership (College & University). Chancellor W. Randolph Woodson, Provost Warwick Arden, and Dean of the College M. Jayne Fleener all began their tenure this year. Reorganization within the College and across the University marked our activity as both units moved to centralize aspects of business operations, a process that remains ongoing.

Economic Climate. The continuing slow recovery of the economy in NC brought budget reductions that have reduced College resources available to invest in future growth and have constrained fiscal flexibility for the foreseeable future. Managing forward in a time of declining resources is a challenge.

MAJOR INITIATIVES AND CHANGES TO PROGRAMS

Race to the Top. *Crossing the Finish Line a Winner:* The Friday Institute for Educational Innovation led the successful North Carolina Race to the Top proposal, bringing \$400M in education funding to the state. The NC State University team worked in collaboration with the Governor's Office, the State Board of Education, the Department of Public Instruction, school districts, UNC general administration and several campuses, professional associations, nonprofits and the business community. Upon receipt of the grant in August 2010, the Friday Institute is leading three major initiatives. The NC Education Cloud: The statewide transition to a cloud computing/support services infrastructure for K-12 public education. The Northeast Regional Leadership Academy: a new approach to recruiting, preparing and supporting leaders who will turnaround low performing schools. The Evaluation of the Race to the Top program: a unique collaboration with the SERVE Center for Continuous Improvement at UNC-G and Carolina Institute for Public Policy at UNC-Chapel Hill.

21st Century Teacher Education. The College has completed the 21st Century curriculum re-visioning designs of teacher and principal preparation programs; implementation of the new programs began in spring 2011, with full implementation expected no later than spring 2012. Several of our programs in Curriculum, Instruction, and Counselor Education have been transformed and merged under the New Literacies and Global Learning program area. The Technology Education and Graphic Communication programs have merged and been transformed into Technology, Engineering, and Design Education. One of our staff members has developed an approach to curriculum that has been picked up by Discovery Education; the FIZZ program is being implemented in a variety of classrooms and one school in Raleigh has "flipped" their math class.

Flipping the Classroom. FIZZ is a new, innovative approach to teaching that takes the traditional lecture out of the class, and opens instruction time for collaborative and engaging student learning activities. The goal is to find new ways to implement standards-based lessons with differentiated instruction so all types of learners have the chance to attain academic success. Lectures are delivered by the teacher through video homework so the students can utilize class time to the fullest, with varied activities that allow for higher-level instruction, understanding and application. "FIZZ is training teachers to 'flip the classroom' and students are now watching their teacher lecture outside of the class," said Dr. Lodge McCammon, a curriculum and contemporary media specialist from the Friday Institute. "This allows the teacher to specialize in the diagnosis and treatment of their students—identifying and meeting the needs of each learner. FIZZ is a powerful and engaging model of education we can now offer this new generation of learners." Katie Gimbar, Algebra teacher at Durant Road Middle School, is currently piloting McCammon's FIZZ program. Ms. Gimbar received her Bachelor's degree in Middle Grades Mathematics and Science Education in 2006 from NC State University.

Distance and International Learning (I+DEA). In August 2010 the College formally began an initiative that will create global opportunities so that by 2014 100% of all College undergraduates may have an international experience before they graduate. In this respect the College changed its Distance Education Office to spear-head its global efforts as well and the International + Distance Education Alliance (I+DEA) was born. The distance education office was the natural choice to place this new program as it had already begun to develop partnerships with Universities and schools in Curitiba, Brazil and Beijing, China. Our current globalization efforts include these and newly formed partnerships between the College and institutions in London, England and Pskov, Russia. In January 2011 we approached Wake County Public Schools (WCPSS) to be an additional partner with us in Beijing. WCPSS and the College will be sending students to Beijing this fall in a joint exchange program. Also, talks with UNC-Wilmington are underway to share this same Chinese partner (and possibly others) while UNC-W will share their partners in Kuwait, South Africa, and Belize. Some more on the partnership with Brazil follows.

Teachers in Training Take on Brazil. As the university seeks to become more globally engaged, programs with a traditionally local focus are looking beyond the borders of the state, and even, the country. This March, the College of Education sent the first group of students to Brazil as part of the new Student Teaching Abroad Program. The education students student-taught in public schools all over North Carolina for the first 10 weeks of the semester and spent the remaining 6 weeks teaching abroad in Brazil. While stateside, the students underwent an intensive, once a week pre-departure course. They learned basic Portuguese, Brazilian culture and the Brazilian education system. While in Brazil, the group had an impressive itinerary. The NC State students visited public and private schools, collaborated with Brazilian pre-service teachers at the university in Brazil and experienced the culture through visiting parks, museums, theaters and the Atlantic Rainforest.

Technological Innovation. The College embraces the university focus on innovation and technology. We have maintained our cutting-edge technology innovation and support in a variety of ways.

- We are implementing a 1:1 laptop program for all of our initial teacher licensure students and working with faculty to ensure the use of technology tools is implemented throughout the certification programs.

- Our technology integration experts offer Tech Tuesdays for faculty, staff and graduate students to provide on-going support and professional development using the latest technology teaching and productivity tools.
- We offered an outreach program to alumni to provide professional development on technology tools.
- We developed a Passport to Success requirement for all initial teacher licensure students that includes demonstrating innovative use of technology tools.
- We used one-time Provost monies to expand the technology support offerings of our media center and to create collaborative learning spaces that are technology-rich and model 21st century learning opportunities.
- The Friday Institute continues to provide leadership and support to the 1:1 programs across the state. The 1:1 program has evolved to now include the Cloud Computing Initiative being funded by Race to the Top.

DIVERSITY: INITIATIVES AND PROGRESS

The College of Education received one time funding to recruit a more diverse graduate student and faculty population, develop and disseminate recruitment materials, and actively engage faculty and staff in initiatives that promote diverse perspectives and innovative programming. Some of the funded projects and initiatives are highlighted below.

- Designed and implemented a residential summer research experience, “SURE: Summer Undergraduate Research Experience,” for rising college juniors and seniors from HBCUs.
- Created new College of Education graduate brochures and exhibit banners
- Made recruiting visits to 13 historically Black colleges and universities in NC and SC
- Distributed graduate recruitment materials at four national conferences
- Hosted a “Recruiting Racially Diverse, Culturally Competent Faculty” webinar
- Funded four mini-grants to support faculty and staff projects such as “Reaching Out: How a Gay, Lesbian, Bisexual and Transgendered (GLBT) Community Views NC State University and the College of Education”
- Developed a pipeline activity encouraging underrepresented groups to consider STEM teaching careers (see below).

Interested in teaching Math or Science? We PERSIST! Pre-College Experiences to Recruit Students Into Science Teaching (PERSIST) is a science and mathematics teacher recruitment program for high school students with high potential, but who may not have been encouraged to pursue mathematics or science teaching as a career. The NC MSEN PERSIST Scholars Fall 2010 Leadership Conference, Pathways to Teaching, hosted 55 high school seniors from across the state on October 2. Dr. Rita Fuller, Director, NC-MSEN Pre-College Program; Mr. Braska Williams, NC State University NC-MSEN Pre-College Program Coordinator; and Danny Bland, Director of the NC Teaching Fellows planned the conference for the students in the PERSIST Scholars Program. It was held at the Friday Institute for Educational Innovation on NC State University's Centennial Campus. From the beginning, one of the goals of PERSIST was to not only encourage the participants to become teachers, but to also prepare them to take advantage of available scholarship opportunities as seniors. Pathways to Teaching gave the students all of the necessary information to make the transition from high school student to college student, and then to a teacher preparation program participant.

INSTRUCTIONAL PROGRAM ADVANCES AND PROGRAM REVIEW

Major curriculum and program changes for the College clustered in three areas: 1) approvals for required courses supporting the re-visioned initial preparation programs for teachers and school principals; 2) development and approval of a standardized, sequence of research methods courses for doctoral programs in the College; and 3) the development

and approval of a six-course sequence of graduate courses in Elementary Education designed to prepare mathematics education specialists for elementary schools. All teacher education and school administration programs (except Foreign Language Education) received approval for courses and curricula comprising the “blueprints” for re-visioning as submitted to the State Board of Education. In a related development, the Student Engagement and Success division in the College of Education developed a program called “Passport to Success” that integrates academics and student affairs programming, recognizing the completion of co-curricular and study abroad activities that support and complement academic programs. Following a multi-year development process by a faculty task force, a standardized set of doctoral research methods courses received approval from the College Graduate Studies Committee and the Administrative Board of the Graduate School. The five-course sequence includes two courses in quantitative methods and two in qualitative methods. All courses use examples and data sets from the field of P-20 education to illustrate and elaborate the content of the courses. Implementation will occur in the fall of 2011. Faculty from Elementary Education and Mathematics Education participated in a state-wide effort to develop a UNC System-wide set of courses designed to improve mathematics instruction in elementary schools and to prepare elementary mathematics education specialists. The courses were approved in the spring and will be implemented in summer, 2011. In the area of information system development to meet accreditation standards, The Knowledge Management and Assessment unit worked on three new SAGE modules (our advising and licensure information system integrated with SIS). The Master of School Administration (MSA) module, the Masters of Arts in Teaching (MAT) module, as well as the redesign of the initial license programs are currently in production. The e-portfolio for electronic evidences is in beta test currently and is slated for a fall 2011 release. Work on the professional development (Passport to Success) module is currently in the development phase with an estimated roll out of spring 2012. The Knowledge Management unit also provided significant support in preparation for the fall 2011 CACREP accreditation visit to the counselor education program.

RESEARCH

During the fiscal year to date, College of Education faculty submitted 61 proposals requesting a total of \$35 million. Of these, 14 new awards have been made totaling \$12 million, with approximately \$4 million in additional funding expected to come from proposals now being negotiated with the NSF. The anticipated total of \$16 million, if achieved, would break our previous annual record for new awards (last year) by \$2 million. Here is an example of our research.

Where Innovative Research Creates National Policy: Researchers in the College of Education have integrated theory, research, and practice through their participation as content experts on prominent national committees engaged in K-12 curricular reform. As part of the national reform agenda for mathematics education, North Carolina joined what is now a consortium of 37 states adopting the Voluntary State Common Core State Standards for Mathematics. Laying the foundation for this historical action was the work of an NC State faculty member, whose research and voice played a vital role in revising and validating the math standards. Dr. Jere Confrey, Joseph D. Moore Distinguished Professor in Mathematics Education and Senior Research Fellow at the Friday Institute for Educational Innovation, served on the Common Core Standards Initiative Validation Committee. "Developing a set of shared Common Core State Standards is an essential element in coordinating and intensifying our determination to prepare all students to participate successfully in a global economy based on innovation in science and technology," said Dr. Confrey. Her current research interests focus on analyzing national policy, synthesizing research on rational number, designing diagnostic assessments in mathematics focused on student thinking, building innovative software linking animation and mathematics, and studying school improvement for under-served youth at the high school level in rural and urban settings. She holds multiple grants from the National Science Foundation and the Qualcomm Foundation.

EXTENSION

In addition to efforts reported elsewhere in this document, College of Education faculty engaged in a wide variety of outreach activities including service as consultants for schools, museums, and a planetarium; on professional association councils or committees; or on advisory boards, boards of directors, and scholarship committees for schools and school districts. Several noteworthy appointments include service on the NC Governor's Education Transformation Commission, on the NC e-learning Commission, on the Validation Committee for the Voluntary Common Core State Standards Initiative, on the Teacher Effectiveness Task Force, and on the North Carolina Accountability Commission. Departmental faculty members actively engaged in a variety of teacher professional development activities including providing workshops for teachers throughout the state in all disciplines both in person and online. College faculty also worked extensively with NCDPI personnel in revising and drafting descriptors for the NC Standard Course of Study, especially in STEM areas. In Adult and Higher Education, the National Initiative for Leadership and Institutional Effectiveness provided technical reports for community colleges around the country. The College maintains more than 30 "Online Tools for Schools," including LabWrite, Nurturing Mathematics Dreamkeepers, and MEGA (Middle Educators Global Activities). MEGA connects approximately 1,100 educators from 81 school systems across North Carolina to NC State faculty and students through an active email network and quarterly professional development workshops. The SUCCEED Mentoring Program provided consultation and novice teacher mentor training to colleges, universities, and school systems, and initiated a four-year evaluation effort to measure beginning teacher perceptions of success in nine South Carolina school districts. The Diagnostic Teaching Clinic provides a source of comprehensive psycho-educational assessments for students who exhibit learning-related problems. The Friday Institute and the Educational Leadership

Program operate the Innovation Leaders Academy to provide consultation and training in site-based problem solving for teams of teachers and administrators from six school districts in northeast North Carolina. Finally, in an example of how research and outreach are often combined in the College, Paola Sztajn was awarded five NSF grants this year (three of them multi-year projects), all in the area of teacher professional development and totaling \$5,081,964. Following is another example.

Innovative Partnership for Leadership Training. Finding quality administrators to lead rural school districts is no easy feat. But researchers at NC State University have created a non-traditional training program that puts highly qualified teachers and administrators in leadership positions at the most needy and underperforming districts in the state. Drs. Bonnie Fusarelli and Matt Militello's program called the Northeast Leadership Academy (NELA), brings a master's of school administration graduate program to teachers and central office staff from school districts in Bertie, Hertford, Northampton, Halifax, and Warren counties and Roanoke Rapids and Weldon City. The NELA curriculum is tailored for future leaders of high needs, rural schools. After graduation, all members of the academy will make three-year, post-degree commitments to work in high needs schools in the northeast part of the state. Those school districts will utilize NELA graduates as the first line of replacements for assistant principal and principal openings in the districts' high-needs schools. On August 31, 2010 NELA kicked off with an inspiring call to service by Governor Bev Perdue. "I can promise you that the educational eyes of America are on you," said Gov. Perdue. She went on to add that building local teachers to be future leaders is critical to make achievement gains, "You are going to grow where you were planted." NELA started from a \$2.4 million grant from the Bill & Melinda Gates Foundation and North Carolina's Department of Public Instruction and will be further supported by North Carolina's recent awarding of Race to the Top funds by the U.S. Department of Education.

FACULTY

Several College faculty members received significant recognition locally, regionally, nationally, and internationally.

Some examples follow: M. Jayne Fleener was awarded the 2010 ADVANCED Leadership Award. Ted Branoff is president of the International Society for Geometry and Graphics. Aaron Clark is vice chair of the Engineering, Design and Graphics Division of the American Society for Engineering Education. Patricia Simmons served as President-elect of the National Science Teachers Association. James Haynie received the *Epsilon Pi Tau* Distinguished Service Award and the NC Technology Student Association Lifetime Service Award. Temple Walkowiak was selected to be one of 30 STaR Fellows (nationally), an NSF-funded program for early career professionals in mathematics education. Julia Storberg-Walker received an Academy of Human Resource Development Early Career Award. Raymond Ting is a NASPA Fellow (Student Affairs Administration in Higher Education). Hiller Spires received the 2010 Jackson Rigney International Service Award and Tim Hatcher received the Turner Award for Extension and Engagement. Lori Holcomb was inducted into *Sigma Iota Rho*, Honor Society for International Studies. Shawn Holmes received the 2010 National Technology Leadership Initiative Science Education Fellow Award sponsored by the Society for Information Technology and Teacher Education in collaboration with Association for Science Teacher Education. John Park was Vice-Chair of the Society for

Innovation in Technology and Teacher Education and was elected to serve as President-Elect of the School Science and Mathematics Association.

STUDENTS

During the 2010-2011, our students continued to excel in leadership positions across the campus while demonstrating scholastic achievement in the classroom. The College of Education first year students had the 2nd highest university end-of-year grade point average (3.14) among their university counterparts. The total grade point average for all undergraduates in the College (3.12) was also the 2nd highest compared to other academic colleges. The Association for African American Student Educators' president was honored with the University Diversity Award and as the Most Distinguished Person at the Ebony Harlem Awards. During the Association for the Concerns of African American Graduate Students banquet, a College senior was awarded the K. Williamson SAAC Leadership Award for her leadership as head of the Society of African American Culture. Student teams in the undergraduate TDE classes came in First, Second and Third in the North Carolina State Technology Student Association 2011 Signature Competition: VEX Robotics Regional Competition and TDE undergrad Daniel Spake came in First in the national Alaska Design Challenge. In the fall 447 College undergraduates attained the Dean's List. Three College of Education students were honored as Top Ten Scholar Athletes at the Caterpillar Scholar Athlete Banquet, and 14 College of Education students were inducted into the Kappa Delta Pi Honor Society this year. Teaching Fellows logged over 3,000 hours of service to the public schools of NC; logged over 1,000 hours of service for the American Red Cross, Habitat for Humanity, American Cancer Society, and Ronald McDonald House; and co-sponsored a mega blood drive raising 569 units of blood.

FUND RAISING

The economic downturn and slow recovery continue to impact national fund raising efforts including those at NC State. Nonetheless, private giving and non-governmental grants to the College to date total \$853,753, an increase of 187% relative to this time last year. Additionally, annual giving increased 60%, and the College endowment, following several years of erosion, recovered somewhat, growing 36% in FY11. Several College of Education scholarship endowments remained "underwater," but donors made current use gifts to cover this year's scholarships so that our students received \$290,832 in scholarships and aid in FY11.

ADMINISTRATION: ACHIEVEMENTS AND STAFF CHANGES

Dr. M. Jayne Fleener, formerly dean of the College of Education at Louisiana State University, began service at NC State on July 1, 2010. Among the target activities for Dean Fleener's first year were to increase college visibility, expand and enhance relations with external constituencies, support technological innovation, and expand and enhance international activities. Significant strides were made in each of these areas, including raising visibility and building relations with external constituencies via the work of the Friday Institute (e.g., Race to the Top and the Governor's e-Learning Commission); hosting several NSF-funded national summits in the area of STEM education; meeting with Governor Perdue, former governor Hunt, community college presidents, NCDPI, and Principal Association leaders; and serving on numerous boards and advisory councils, including the Board of Directors for the Public School Forum. The College was recognized by US News as among the institutions making the largest jumps in its ranking nationally among graduate schools in education – up 47 places to 64th. Major initiatives described in an earlier section of this report focused on 21st Century Teaching, Technological Innovation, and enhancing international experiences and global learning. Other achievements are indicated below in regard to specific strategic goals of the University.

RECOMMENDATIONS AND CONCERNS FOR THE FUTURE

The College of Education continues its efforts to become a nationally recognized, research-intensive professional college with distinction in teaching and learning in technology-enriched environments. We share the University's vision to be an exemplary land-grant university for the 21st century. We believe such a vision calls upon the College to fulfill its goal with statewide reach and national stature. The College is committed to contributing to the central thrusts of the University through improved and invigorated teaching, research, and outreach programs. We are addressing the state's teacher shortage aggressively, particularly in STEM disciplines. However, there are also demands to address shortages of administrators, counselors, and community college personnel. We seek to play a vital role in meeting these challenges, and we are vigorously pursuing those activities most likely to garner individual, corporate, and governmental support. Several specific concerns in regard to future actions include these:

1. Budget reductions and business operations restructuring will make it a challenge to vision and manage change. The State of NC budget, for example, eliminates funding for the Teaching Fellows program, a move that going forward will result in the loss of 50 scholarships each year for our teacher preparation programs.
2. Retaining faculty will remain a challenge as we enter yet another year without raises and without the ability to provide counter- or retention-offers.

3. Reorganization of business operations will be a challenge across campus requiring sensitivity and attention to individual differences and needs.
4. We have the capacity to continue to grow many of our programs, especially those leading to certification through Distance Education (DE). Right-sizing our program offerings, meeting the expectations and needs of the university, while also being forward thinking and strategic will be particularly important during these times of budget reduction. The expansion of for-profit teacher certification may become an issue in North Carolina as it has in other states.
5. Colleges of education are increasingly scrutinized by external constituents and subject to significant accreditation pressure, both nationally and in the state. The NCTQ evaluation of colleges of education is an example of how responses to public perceptions about teacher education programs can present challenges.

EXAMPLES OF ACTIONS ILLUSTRATING THE STRATEGIC GOALS OF THE UNIVERSITY

NC State's goals include the following areas in which we are contributing directly:

1. *Enhance the success of our students through educational innovation.* As described earlier, the College is emphasizing 21st century teaching and learning via technology. We have begun a 1:1 laptop requirement, provided professional development opportunities for the faculty to take advantage of the enhanced technology, and upgraded the Media Center and other spaces in Poe Hall to facilitate collaborative and technology-enhanced work.
3. *Enhance interdisciplinary scholarship to address the grand challenges of society.* Five former master's degree programs in curriculum and instruction have been recast, enhanced, and integrated into a single degree in New Literacies and Global Learning. The new program emphasizes 21st century literacy skills and preparation for success in the global information society. Similarly, the programs in Technology Education and Graphic Communication have been revised and combined to create a new degree in Technology, Engineering, and Design Education, a program that we are continuing to develop in collaboration with the colleges of Engineering and Design.
4. *Enhance organizational excellence by creating a culture of constant improvement.* In preparation for campus-wide reorganization of business operations we have worked with a college task force to plan and implement centralized pre-award research development, post-award research management, and human resource functions. The group is continuing to work toward centralizing all remaining financial operations, with a focus on improved service and employee satisfaction.
5. *Enhance local and global engagement through focused strategic partnerships.* We have negotiated international partnerships with higher education institutions and schools to provide the opportunity to do student teaching abroad, in Brazil, China, Russia, and England.