

NC STATE University

College of Education

FY10 Annual Report

June 25, 2010

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

1. **Coping with the State of North Carolina budget shortfall.** The declining economy in NC brought budget reductions that have reduced significantly College resources available to invest in future growth and have constrained substantially fiscal flexibility for the foreseeable future.
2. **Increased attention to improving the quantity, quality, and geographic distribution of public school teachers and administrators.** The College of Education continues to take an aggressive and strategic approach in tackling the critical shortage of qualified classroom teachers throughout the state of North Carolina. The critical shortage areas are Science, Math, Middle Grades, and Special Education. NC State leads the state in production of math teachers; we have increased numbers of science teachers; we have employed a recruiter to increase STEM teachers, especially teachers of color; the middle grades program continues to yield the second highest number of new teachers in the UNC system; and the MAT program has begun to produce Special Education teachers. NC State ranks third among UNC institutions in the production of school principals (MSA degree), with more than half of these completing off-campus distance education programs. The re-visioned MSA program has been featured as a model program for the state.
3. **Curriculum re-visioning.** The College of Education school administrator (MSA) and teacher education programs, following a mandate from the State Board of Education, completed “re-visioning” of all programs that lead to initial teaching or administrator license. This process entailed submitting “blueprints” of changes to conform to new NC Professional Teaching and Leadership Standards, receiving approval for those blueprints from the State Board of Education, then developing and receiving curriculum approval for a set of core and specialization courses, activities, and electronic evidences. “Blueprints” for each re-visioned graduate program will be submitted to the State Board of Education for approval on June 30, 2010. The new undergraduate programs will start in spring, 2011.
4. **Expansion of Friday Institute personnel and programs.** The Friday Institute continued to grow in personnel and programs, broadening the research, outreach, and public service activities and obligations across the College. The NC Governor’s office invited the Friday Institute and Glenn Kleiman, Executive Director, to lead the state-wide effort to develop the proposal for the competitive federal stimulus program known as Race to the Top. The College and the Friday Institute have developed a memorandum-of-agreement establishing a satellite business office at the FI and clarifying responsibilities on both sides. We have begun implementing the changes in contract management, finance, and HR services, adding two positions at the Institute to handle the additional responsibilities.

Compact Plan 2007-2010: Progress toward implementation

- 1. 21st Century Teacher Education.** The College has completed the 21st Century curriculum re-visioning design at the undergraduate level. The Technology Education and Graphic Communication curricula have merged to form a new major in Technology, Engineering, and Design Education. All undergraduate licensure programs have been successfully re-visioned according to the parameters set forth by the State Board of Education. Partial implementation of the new programs will begin in Spring 2011 with full implementation expected no later than Spring 2012. The Office of Professional Education has expanded its functions to include the centralized placement of all field experiences in public schools. Over the course of FY10, the OPE has arranged over 1000 field placements in local public schools and secured nearly 300 student teaching placements for students in both undergraduate and alternative licensure programs. The number of licensed professionals prepared for North Carolina Public Schools by NC State continues to increase, with 428 program completers in the CED and another 100 in CALS and CHASS, all administered in the OPE.
- 2. Distance and Extended Learning.** Distance education programs in the College increased student credit hour production by 43% over FY09, in large part a result of higher than anticipated enrollment in the newly created Master of Arts in Teaching program (68 students projected, 195 enrolled). International experiences for CED students were enhanced by a summer trip to Costa Rica and arrangements have been made between the College and both the Federal University of Parana in Brazil and the University of Rowehampton/University of Bath in England to initiate a 5-week student teaching program in their respective countries. Our first students are expected to travel in May 2011. In cooperation with Durham County Schools, our NC TEACH lateral entry program opened a new cohort in Durham. The Adult Education doctoral program in Charlotte was redesigned into an executive-style weekend format.
- 3. Research and Graduate Studies.** The all-graduate Departments of Educational Leadership & Policy Studies and Adult & Higher Education have merged to create the Department of Leadership, Policy, and Adult & Higher Education. Graduate enrollment in the College increased by 12.5% in FY10 relative to FY09. Management of grants and contracts has been enhanced with the creation of a satellite business office in the Friday Institute and the filling two newly created positions. When ongoing negotiations with funding agencies are complete, grant proposals submitted in FY10 will have been awarded more than \$9,000,000, a new record for the College.

4. **Infrastructure Improvements to Poe Hall.** Mathematics, science, and technology education teaching and laboratory spaces underwent further renovation and refurbishment as we continue to update these facilities for 21st century teaching and learning. A dedicated teaching space for elementary education was renovated and upfitted with increased technology. Major investments were made to upfit every classroom in Poe Hall to ClassTech standards. Card access devices were added at the main building entrances (4), and security cameras were installed at all entrances and throughout the computer labs and classrooms. A large first-floor space was divided in half so that double the class sections could be scheduled therein. Additional cosmetic refurbishments included painting and new carpet in several suites and rubber tile in the 1st floor hallways.

Diversity: Initiatives and Progress.

As part of a mandatory re-visioning of teacher education and executive education programs work continued in FY10 on a “program parameter” on diversity. This parameter explicitly defines diversity instruction as a set of related coursework and field experiences designed to help students produce positive learning outcomes in all of the K-12 students with whom they work and must be present in each professional education curriculum. The College Council on Multicultural Initiatives and Diversity (COMID) sponsored a faculty forum on diversity at the spring faculty/staff retreat facilitated by Diversity Trainers from NC State’s National Coalition Building Institute. In recognition of Black History Month, the Office of Student Involvement and COMID hosted a weeklong celebration of diversity. Events included faculty and student lectures, panel discussions, and a movie/discussion session. The College of Education implemented a strategic focus to enroll prospective teachers in high need subject areas and prospective teachers of color. As a result, students of color comprised 19% of the 2009 incoming class. In a diversity program serving external constituencies, the Center for Research in Mathematics and Science Education Pre-College Program serves more than 450 middle- and high-school students from traditionally underrepresented populations with activities designed to encourage pursuit of a college education and careers in science, math, engineering, technology, and education.

Instructional Program Advances and Program Review

Program advances and Program Review during FY10 focused on teacher and other educator licensure programs. In October the Unit underwent a focused visit by NCATE (National Council for the Accreditation of Teacher Education) to review progress toward compliance with Standard 2, Assessment. The Unit had received a “not met” rating on this standard during the NCATE visit in 2007. This focused visit was conducted virtually (the first virtual NCATE accreditation visit in North Carolina and the third in the nation) and resulted in a ruling of “Met” on NCATE Standard 2 and the

removal of all “ Areas For Improvement” remaining from the 2007 visit. The NC State Unit for the Education of Teachers and Other Educators is now fully accredited. In addition, all initial licensure teacher education programs had their “blueprints” for re-visioning approved by the State Board of Education. “M,” or Graduate Level Advanced Licensure, programs have worked on their required re-visioning blueprints in FY10 and those will be submitted for approval this summer. As part of the approved re-visioning plan, the College developed and received curriculum approval for new core courses to introduce 21st century teaching and learning and best practices in formative assessment to all preservice teachers. Individual programs also developed and had approved new or revised courses in their majors in order to comply with re-visioning approvals. The Master in School Administration (MSA) program received re-visioning approval from both the State Board of Education and UNC-GA. New courses and programs will begin in FY11.

Research

During the fiscal year, College of Education faculty significantly increased grant activity, submitting 87 proposals (65 in FY09) requesting a total of \$69 million, a record for our College. To date, 21 proposals have been awarded totaling \$2.6 million with approximately \$37 million in requested funding still pending. Of those pending, we are currently negotiating awards for 9 proposals totaling \$6.8 million. As part of our effort to build the research program and strengthen K-12 teacher preparation, especially in STEM areas, faculty are addressing a range of pressing state and national educational issues. Several important projects can be highlighted:

1. Faculty are assisting teachers in six northeastern NC school districts to prepare their students for STEM majors and careers by engaging teachers in inquiry-based, technology-infused science lessons through sustained teacher professional development. The project will also enhance teachers’ technological, pedagogical, and science content knowledge, and awareness of cutting edge scientific research and STEM careers.
2. Faculty research efforts are focused on serving the nation’s need to enhance STEM knowledge for elementary teachers by improving their understanding of calculus, a foundational course for science as well as mathematics. The project will develop, test and refine an innovative undergraduate course for preservice students as well as produce a set of materials and a textbook that will serve as the basis for this innovative calculus course.
3. Building on a previous cutting edge mathematics research project, faculty are exploring the use of smart phones to improve educational outcomes through customized curriculum and assessment in conjunction with location-based resources, collaborative learning, peer mentoring, and social engagement. The team will design, implement, and study a model of wireless device use that leverages social networking to develop diagnostic “learning progress

profiles” in the area of rational number reasoning. It will also examine the feasibility of using smart phones to provide valid and reliable diagnostic information to teachers on student learning.

Extension

In addition to efforts reported elsewhere in this document, College of Education faculty engaged in a wide variety of outreach activities including serving 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; and membership on the North Carolina Accountability Commission. Departmental faculty members actively engaged in a variety of teacher professional development activities including workshops for teachers throughout the state in all disciplines both in person and online. Examples of the content of these workshops included: Science, 21st Century Skills, Social Studies, Writing Across the Curriculum, 1:1 computing initiatives, reading interventions, and the use of data sets in mathematics and science. The New Literacies Collaborative at the Friday Institute was nominated as an outstanding project in the area of professional development by the Center for 21st Century Skills. College faculty also worked extensively with NCDPI personnel in revising and drafting new 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 1,000 educators from 80 school systems across North Carolina to NC State faculty and students through an active email network and quarterly professional development workshops. The Capital Area Writing Project, a National Writing Project site in its 26th year, serves K-12 fellowship teachers in an intensive summer institute designed to help them improve as teachers of writing. The SUCCEED in Mentoring Program provided consultation and novice teacher mentor training to colleges, universities, and school systems. 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 north east North Carolina. Finally, several extensive outreach projects at the Friday Institute illustrate and confirm its commitment to providing service to North Carolina and its communities: *NC e-Learning for Educators* is a state-wide partnership involving the Friday Institute, NC DPI, UNC-TV, LEARN NC, and the North Carolina Virtual Public School to provide high-quality, cost-effective professional development

programs for teachers. *NC Learning Technology Readiness Initiative* is funded by the Golden LEAF Foundation to provide coaching and professional development to 14 LEAs that are planning 1:1 learning technology initiatives. *21st Century Teaching and Learning* is a collaboration with educators from northeastern North Carolina school districts to create innovative classroom practices – and a technology infrastructure to support them – in rural public schools.

Faculty

Several College faculty members received significant recognition locally, regionally, nationally, and internationally. Some examples follow: Jere Confrey, Joseph D. Moore Distinguished University Professor of Mathematics Education, was nominated by Governor Perdue to serve on the validation committee of the Common Core mathematics standards developed by the National Governors Association and the Council of Chief State School Officers. Building upon her research on mathematics learning trajectories and her work on the NC mathematics standards, Dr. Confrey had significant impact on these mathematics standards that will be adopted by most states and influence the future of K-12 mathematics education nationally. Ted Branoff is *president-elect* of the International Society for Geometry and Graphics. Aaron Clark received the *Distinguished Technology Educator Award* from the International Technology and Engineering Educators Association, was elected *chair* of the Engineering, Design and Graphics Division of the American Society for Engineering Education, and received the *Warner Professional Practice Award* from the International Honorary Epsilon Pi Tau for contributions in computational modeling. Patricia Simmons was elected *President-elect* of the National Science Teachers Association. Bill DeLuca was invited by NSF to present the GRID-C project on Capitol Hill, one of 16 projects from across the country featured at this showcase. Edwin Gerler won the Penn State Counselor Education *Award for Outstanding Contributions to the Profession*.

Students

During FY10, our students continued to excel in leadership positions across campus while demonstrating scholastic achievement in the classroom. Ten of the 52 graduating seniors in elementary education were University valedictorians. The CED received the College Academic Award for having at least 50% of its incoming students of color receive a 3.0 or better after their first semester at State. College freshmen had the 3rd highest university end-of-year grade point average among first year students. The College total undergraduate cumulative GPA of 3.09 was higher than the university average of 2.97, and the College African American undergraduate cumulative grade point average was the 2nd highest at the University. College enrollment grew among both undergraduates (7%) and graduate students (12.5%).

Fund-Raising

The economic downturn and slow recovery continues to impact national fund raising efforts including those at NC State. Many College of Education scholarship endowments remained "underwater" for the second year. Endowment donors were asked to make current use gifts to cover this year's and next year's scholarships. All of the solicited donors stepped up and made gifts to cover scholarship awards. Along with some funding from the Chancellor's Office this meant that our students received \$330,674 in scholarships and aid in FY10. Numerous private foundation members of NC Network of Grantmakers made gifts to help fund the preparation of the Race to the Top proposal for competitive federal funding for education in the state of North Carolina. The state-wide effort out of the Governor's Office was led by Glenn Kleiman, executive director of the Friday Institute. As we approach the June 30, 2010, the College of Education has brought in \$147,022 in private gifts and the Friday Institute has brought in \$174,836.68 as of 6/4/2010.

Administration

Changes: Interim Dean Jose Picart stepped down at the end of FY10, returning to his role as Vice Provost and undertaking other leadership projects for the University. Dr. M. Jayne Fleener, formerly dean of the College of Education at Louisiana State University, begins service at NC State on July 1, 2010.

Achievements: In a year of economic downturn and with interim leadership, the College of Education nonetheless embraced and implemented Interim Dean Jose Picart's oft-repeated slogan, "moving forward together." Significant curriculum re-visioning was completed, and major initiatives were implemented in *Technology* (e.g., the 1:1 New Learning Ecology), *Globalization*, the *Northeast Leadership Academy*, *Disability Access*, and *Poe Hall refurbishment*. Members of the College faculty garnered national and international awards, both graduate (12.5%) and undergraduate (7%) enrollment grew, and we are on track to a record setting year for new sponsored program awards. The Friday Institute played a major role in developing the NC Race to the Top proposal, which seeks \$400 million from the U.S. Department of Education stimulus funding to further educational innovation in the State. In round 1, NC was one of the 16 finalist States, and Glenn Kleiman, Executive Director, was a member of the five-person team that represented NC at the U.S. Department of Education presentation in Washington. Although NC was not one of the two states funded in the first round, the round 2 proposal has just been submitted, and we will know the results by early September. The Friday Institute's Executive Director and Director of Technology are both members of the NC E-Learning Commission, now chaired by Lt. Gov. Walter Dalton. The commission is a partnership between business, government, and the State Board of Education to develop policies and programs relating to technology for K-20 education. Phil Emer has been

tapped to co-chair this group for the coming year and Glenn Kleiman is the co-chair of the Teaching and Learning sub-committee. The Friday Medal was awarded in November to Chris Dede, the Timothy E. Wirth Professor in Learning Technologies, Technology, Innovation, and Education at Harvard University. An international expert in learning technologies and related policies, Dr. Dede's research includes focusing on emerging technologies for learning and incorporating technology into educational initiatives, and he serves as a Special Consultant to the Friday Institute.

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.

1. In FY10 the College Office of Professional Education placed nearly 300 students in public schools for student teaching experiences. The total cost of this process is in excess of \$200,000, with the costs of administering the Student Teaching experience borne exclusively by the CED Dean's Office. As we are expected by UNC General Administration to continue to increase our productivity (licensure graduates) we can only anticipate a further increase in the needed financial resources to administer the program in an efficient and effective manner.
2. In preparation for continuing economic uncertainty we need to redouble work on criteria and documentation processes for determining "core mission" proximity and alignment to guide future reductions, reorganizations, or eliminations.
3. To meet the demand for more diverse teachers and counselors, we will continue efforts to recruit and maintain a diverse student body and faculty.
4. 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 of being a research-intensive professional school 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.

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

Producing leaders: Current NC State Superintendent of Public Instruction June Atkinson, former NC State Superintendent of Public Instruction Mike Ward, and former US Assistant Secretary of Education and Mississippi State Superintendent of Schools Henry Johnson are College of Education Ed.D. graduates, as are numerous Community College Presidents in NC and elsewhere.

Creating educational innovation: Led by the Friday Institute, The 1:1 Learning Collaborative supports teachers, administrators, technology facilitators, and others in 1:1 learning technology environments by providing an array of high quality professional development opportunities and web based resources focused on implementing educationally effective 1:1 computing programs. The Friday Institute continues to develop a process and suite of tools called FIZZ in which teachers can implement extremely safe web 2.0 environments. These tools allow teachers to safely broadcast teaching and learning outcomes over the Internet so students can share their work with parents and friends, in addition to teaching them about Internet safety issues. FIZZ is currently being utilized in 56 schools across 11 NC counties. College faculty created Crystal Island, an interactive virtual gaming environment that teaches microbiology content from the NC Standard Course of Study.