

**UNIVERSITY OF NORTHERN COLORADO
CCHE PERFORMANCE CONTRACT
TEACHER EDUCATION 2005-2006 ANNUAL REPORT**

The College of Education and Behavioral Sciences report provides information and documentation that ensures the UNC teacher education program meets the Teacher Education Standards as outlined under “Goal #4: Teacher Education” in the Department of Higher Education Performance Contract created by the Department of Higher Education and the University of Northern Colorado and signed on February 11, 2005. This annual report on the Teacher Education Program is for the reporting period of July 2005 – July 2006. As per the 2005 CCHE Performance Contract Reporting Guidelines, the supporting data and documents (Appendixes A-D, pp. 14-205) cited in the report are retained in the CEBS Dean’s Office and are available upon request.

Goal #4 - Section 1: Teacher Education Program

1.3. By July 1, 2006, the Governing Board shall ensure that its teacher education program meets the following standards:

1.3 (a- part 1) Candidates receive instruction on teaching diverse student populations.

In the Professional Teacher Education Programs (PTEP) the topic of diversity and how to teach diverse student populations is threaded through the following courses and field experiences that are required of all teacher candidates (Syllabi with highlighted sections related to teaching diverse student populations are in Appendix A.):

EDF 366 Conceptions of Schooling (all teacher education candidates)—coverage of school and society and teaching in a multicultural/diverse context.

EDSE 430 Exceptional Student in the Elementary Classroom; EDSE 360 Adaptation, Modification, and Integration of Curriculum for the Secondary Exceptional Learner; and EDSE 433 Exceptional Students in the Regular Classroom—courses focus on working with students with special needs. EDSE 460 Culturally and Linguistically Diverse Students with Disabilities - all Special Education Generalist candidates learn instructional and assessment practices for language and cultural variables in students with disabilities.

EDEL 360 Service Learning and Literacy Tutoring Experience; EDEL 460 Integrated Methods I: Reading, Language Arts, Science and Health; EDEL 470: Effective Instruction in Elementary School Mathematics (all elementary licensure candidates) and EDRD 340 Developing Language and Literacy in the Content Areas (all secondary and

K-12 candidates)—topics include stages of second language acquisition as well as learning and implementing strategies for assisting English Language Learners (ELL) in the development of background knowledge, vocabulary, and comprehension.

PSY 347 Educational Psychology for Elementary Teachers and PSY 349 Educational Psychology for Secondary/K-12 Teachers—instruction and application of knowledge about individual differences in learning; gender differences, group differences by ethnicity and SES; diversity and equity issues in testing.

The secondary and K-12 programs afford teacher candidates the opportunity to attend a series of specialty seminars. These seminars address topics relevant to diversity (e.g., ESL, differential instruction, teaching at-risk students, and special education).

In addition, the UNC teacher education program has a performance-based standard for diversity. The standard requires candidates to demonstrate proficiency in the following standard elements: recognize and understand how students differ from one another; create an environment that allows for diversity by providing appropriate learning opportunities for individuals with diverse backgrounds, experiences, abilities, values, and perspectives; and select materials that meet the needs of a variety of learners. The candidates are evaluated on the diversity standard by university faculty, consultants, and cooperating teachers during the candidates' field and student teaching experiences. Also candidates must document their proficiency in diversity by entering two representative artifacts in their faculty-evaluated portfolios. The evaluation instruments used to evaluate teacher candidate proficiency in the diversity standard are at the end of Appendix A.

1.3 (a-part 2) Candidates, through required pre-rotation or student teaching experience – spend time in a Title I or low performing or unsatisfactory schools with an improving or stable rating based upon the results of the previous year's School Accountability Report by the CDE.

UNC has worked for the past fifteen years to develop and sustain university partnerships with public elementary, secondary, and middle schools. There are currently nearly fifty elementary, middle and high schools associated with the elementary and secondary/K-12 programs where candidates are placed for various phases of their education. These partnerships take time to create and continued effort to sustain; we have strong obligations and commitments to all of these schools. These schools are quite unique in the economic, cultural, ethnic, and linguistic diversity they represent. All candidates are placed in more than one school during their preparation and the program is working to ensure all candidates have a pre-rotation experience in diverse settings, including to the extent possible well-structured experiences in Title I or “low/unsatisfactory, but stable/improving” performing schools.

The elementary program has required all candidates in the program to complete an early field-based service learning project (EDEL 360) that takes place in a richly diverse partner school for the last five years. The Greeley schools involved in the early field project are ‘low’ performing, and include East Memorial, Jackson, Jefferson, Ann Heiman, Madison, and Billie Martinez Elementary schools. Approximately 200-250

candidates complete this experience each year. Because of the large number of candidates in our program, Dos Rios Elementary School with an “average” performance rating was added to the rotation. However, 67% of the student population at Dos Rios receives free and reduced lunch and well over 50% of the school is Hispanic.

During this pre-rotation, candidates are required to provide approximately 30 hours of literacy tutoring to an elementary student experiencing difficulty with reading and writing in a Title I or low performing elementary school. Working under the guidance of university faculty and partner school Teachers on Special Assignment, the candidates gain valuable experience assisting the individual literacy and learning needs of children from linguistically, culturally, and economically diverse families.

The Secondary and K-12 programs have partnerships with ten high schools and middle schools within a reasonable driving distance from Greeley. Many early and advanced field placements occur in schools that are Title I or low performing; some teacher candidates are placed in such schools for student teaching. To maximize the placements of our candidates in diverse school settings, we recently elected to begin a new partnership at Northridge High School in Greeley. This is a “low” performing high school with 40.9% of the student population on free and reduced lunch. During fall 2005 and spring 2006 eighty-one candidates out of 413 candidates were placed in our two “low” performing partner high schools. However, when the social-economic status of the student population is used to determine diversity, 57% of the secondary/K-12 students have a pre-rotation in an economically diverse school setting. The percent of students on free and reduced lunch in five of the partner schools ranges from 22.3%-41%. A chart showing these data is the final document in Appendix A.

In addition, a new pre-rotation experience was designed and implemented in the secondary/K-12 programs to ensure a quality experience for the secondary/K-12 candidates in a low performing school during the spring 2006 semester. Nearly forty percent of the secondary and K-12 candidates (46 of 114 candidates) engaged in a new Gear Up project with seventh graders at Franklin Middle School, a low performing middle school in Greeley. The goal of the Gear Up Project (a federally funded pre-collegiate program) is to provide under-represented and under-achieving students the opportunity to acquire skills, encouragement, and preparation needed to pursue a college education. The College of Education and Behavioral Sciences provided \$12,550.00 in-kind funds to support this semester-long project and is committed to continuing this support for the next five years of the grant.

As a part of the Gear Up project UNC Secondary/K-12 teacher candidates register in EDRD 340, a content-area reading class required for licensure. The content-area reading course is taught at the middle school and the UNC candidates tutor the selected seventh graders for 40 minutes during the class. During the spring 06 initial project, 21 Gear Up students who were partially proficient on the CSAP were targeted for the project. The UNC tutors provided a tutoring lesson two days a week on reading and writing in the content area. The university instructor and the Gear Up on-site coordinator observed the tutoring sessions and gave feedback to the tutors. The UNC tutors also acted as mentors

in discussing college life and encouraging the students to continue their education beyond high school. At the end of the semester, the Gear Up students joined their UNC tutors on campus for lunch in one of the dining halls and for a tour of the university. UNC is continuing this project at Franklin Middle School during both semesters of the 2006-2007 academic year, thereby expanding the opportunity for the number of UNC teacher candidates in the program. The same middle school students will be continued in the program as eighth graders and a new cohort of seventh graders will start the program.

UNC faculty members are working to create well-structured, meaningful supervised experiences for all Secondary/K-12 candidates where the work candidates complete with diverse student populations can be maximized.

1.3 (b) Candidates have not less than 400 hours of each teacher candidate's 800- hour field experience shall be spent student teaching.

All candidates have a student teaching experience that is at least 400 hours. The Secondary, K-12, and Special Education programs require a full semester of student teaching ranging from 600 to 645 hours. The Elementary program requires an initial Block I Student Teaching experience that is a 400-hour experience and the final Block II Student Teaching experience is eleven weeks or 440 hours.

1.3 (c) Received instruction on the comprehension, diagnosis, interpretation and effective use of student assessment data, especially data from the Colorado Student Assessment Program (CSAP) Scores.

Candidates are introduced to the comprehension, diagnosis, interpretation and effective use of student assessment in the PSY 347 and PSY 349 courses (syllabi displayed in Appendix B) in educational psychology. Topics include learning basic concepts of educational and psychological assessments, selecting and developing classroom assessment strategies, summarizing student achievement, and understanding and using standardized tests . The texts used in the courses provide the content candidates learn related to assessment. In addition, the candidates apply their understanding by creating lesson and assessment plans for individual and group differences and by stating how their assessment plans reflect sound reliability, standardization, and validity.

During the required Content-area Reading and Writing course (EDRD 340) for Secondary and K-12 candidates, middle school or high school classroom teachers present CSAP data during guest lectures and demonstrate how content area teachers use and interpret reading and writing scores from the CSAP to guide reading and writing instruction in the content areas. The faculty members who teach this course are developing CSAP case studies that can be used for classroom analysis and problem solving beginning fall 2006. The EDRD 340 syllabus is displayed in Appendix B.

Both the Elementary and Secondary/K-12 programs require candidates to be exposed to CSAP scores during their field components. In the Elementary Program, the CSAP scores are a part in the Body of Evidence for documenting students' progress as required by the

Colorado Basic Literacy Act. Teacher candidates in Block I work with the classroom teachers to interpret CSAP results as well as classroom assessments for reading and writing (Block I) and reading, writing and math (Block II). The EDEL 460 and EDEL 480 syllabi documenting these requirements are displayed in Appendix B.

In the Secondary/K-12 programs, teacher candidates complete an initial work sample in the content methods course that focuses, in part, on the integration of student assessment data. During the student teaching component of the program, candidates are assessed by the cooperating teacher on the use of assessment data, inclusive of CSAP data, in the design and delivery of instruction. The assessment instrument used by the cooperating teachers is in Appendix B.

1.3 (d) Received instruction on attitudinal and behavioral differences that influence socialization and learning variations between boys and girls.

All candidates receive instruction on the attitudinal and behavioral differences that influence socialization and learning variations between boys and girls in the PSY 347 and PSY 349 courses in educational psychology. The PSY 347 and 349 course syllabi with highlighted sections related to gender differences are displayed in Appendix C.

In addition, all candidates study topics related to gender and ethnicity/race equity in the use of classroom technology in their Educational Technology (ET 247/347) courses. Students read information from their text and explore various websites related to the topic and engage in an online discussion regarding the issues. A copy of this syllabus is displayed in Appendix C.

In the Elementary program the behavioral differences and learning variations between boys and girls are integrated into the literacy methods course (EDEL 460) where candidates study grouping and practice intervention strategies for struggling readers related to gender. In the mathematics methods course (EDEL 470) candidates study the dynamics of mathematics and gender as well as developing math lessons that document attention to equity in math (gender, ethnic, cultural). Both of the syllabi are displayed in Appendix C.

The Secondary/K-12 candidates study boys and reading in their required EDRD 340 Content-Area Reading and Writing course. Faculty members in the Reading Program completed a year-long study of boys and literacy during the 2004-2005 academic year. The group presented a session on issues related to the literacy needs of boys at the Eastern Education Research Association conference in March 2005. As a result of the faculty study, several reading syllabi were revised to include the important topics related to boys and literacy. Candidates learn about the issues related to boys' literacy achievement, categories of boys related to reading interests, boys and reading motivation, and how to select appropriate texts for boys. A copy of this syllabus is displayed in Appendix C.

1.4 All Content courses leading to the fulfillment of endorsement area requirements for secondary education licensure shall be taught by faculty belonging only to the departments from which the courses originate.

The lists found in Appendix D provide evidence that all content courses leading to the fulfillment of endorsement area requirements for secondary education licensure are taught by faculty belonging only to the departments from which the courses originate. This requirement has been a long-standing practice at the University of Northern Colorado.

Section 2: Recruitment and Training of Qualified Candidates

Section 2 (2.1) Improving the recruitment, retention, and graduation of teacher candidates who are under-represented in Colorado's public schools.

The College of Education and Behavioral Sciences has several initiatives for improving the recruitment, retention, and graduation of teacher candidates from under-represented populations. These include the Center for Urban Education in Denver, the Cumbres Program, Project Teacher Find, and the Native American Innovative Leadership Project (NAIL).

The Center for Urban Education visits with students and paraprofessionals in Denver metropolitan area schools to identify and recruit potential under-represented candidates for its elementary teacher preparation program. Additionally, the Center, working with a Rose Community Foundation grant is formalizing a strategy for collaborating with a school-based liaison to assist in identifying and recruiting minority male high school students.

In order to retain students in the Center for Urban Education, program administrators have a retired master teacher assigned to each candidate to guide and support their efforts in their teacher-apprentice 4-year experience. Also there are tutors available to step in and assist students with academic needs as they arise with their course work.

A major source of encouragement and support for under-represented students in the program comes about through the generosity of foundations. There is financial support for those students needing both immediate/emergency and scholarship assistance.

The Cumbres Program, founded by UNC's Hispanic Alumni Partnership in 1996, encourages more university students to become teachers with state endorsement in bilingual education or English as a Second Language. The expectation is the Cumbres graduates, who were predominately Hispanic, will also be role models for students and to reach school children who may be bilingual or primarily Spanish speakers.

The success of the program, now entering its tenth year, has led to Cumbres partnerships with specific school districts that encourage and sometimes pay for students to complete the program and return to the district to teach. The number of candidates in the program has doubled in the past eight years and UNC now prepares 169 Cumbres candidates.

UNC has graduated more than 100 bilingual and ESL graduates. The director of the program reports graduates have a 100 percent job placements rate after graduation and average five job offers. The Cumbres Program was moved to the College of Education and Behavioral Sciences in fall 2004 to increase its visibility and provide for greater collaboration between the program and college administration and faculty. Several faculty members serve as mentors who encourage and support candidates in the completion of their program. For more information on UNC's involvement in recruiting under-represented students and the Cumbres Program, please access the following link: http://www.diverseeducation.com/artman/publish/article_4835.shtml

Project Teacher Find is a collaborative "grow your own" effort between UNC and the local school district to identify, recruit, and prepare teachers from minority and underrepresented high school students. The Carena Lee-Jex scholarship provides \$18,000.00 each year to 11-18 teacher candidates. The candidates receive \$1,000.00 per year and an additional \$1,000.00 during the student teaching semester. High school students are recommended by their counselors, applications are screened by a scholarship committee composed of district and university faculty, and candidates must maintain at least a 2.75 gpa to be eligible for continued support. Candidates are supported by the Project Teacher Find Committee and especially by the UNC Center for Human Enrichment (CHE). CHE is a comprehensive academic support center for UNC undergraduates with a dedication to first generation and underrepresented students, supporting academic, professional, and personal success. Many of the candidates selected by Project Teacher Find become a part of the Cumbres program.

Through campus student support services, the University provides a range of programs designed to recruit and retain students. This year, for example, faculty and administrators actively recruited students into our programs by making personal calls to students who had applied to UNC. On-campus programs, such as the Cultural Centers and the Center for Human Enrichment, are designed to provide academic, social, and psychological support to students in order to facilitate their progress through academic programs.

The College of Education and Behavioral Sciences is also advancing the recruitment and graduation of Native American teachers in educational leadership through the new Native American Innovative Leadership Project (NAIL). The University of Northern Colorado (summer 2005) was awarded a grant through the Office of Indian Education (OIE), designed for 35 Native American teachers from any tribe who wish to advance their career in leadership. The program will enable future leaders to address the critical needs of students in schools with large populations of Native American students.

The NAIL project also aims to increase the supply of Native American educational leaders using distance learning technology and varied site-based activities for certification as a special education director and school principal. Participants will form two cohort groups of 15-20 students with a possible goal of 40 graduate administrator trainees. This project will use online hybrid content delivery methods drawn from the School of Educational Research, Leadership, and Technology and the School of Special

Education. The second cohort will begin classes spring 2007. For additional information on this project, please see <http://www.coe.unco.edu/NAIL/Overview.htm>

Section 2 (2.2) The Institution shall annually submit the Department on or before August 1st of each year, the student identification numbers and endorsements areas for all teacher candidates.

The information containing the student identification numbers and endorsements will be sent to the Department under separate cover by the UNC Office of Budgets and Institutional Analysis.

Section 2 (2.3) The Institution will participate with the Department in analyzing the placement in K-12 schools of teacher candidate graduates and their performance once placed by providing available data concerning graduates to the Commission, subject to the limitations of any applicable privacy law.

As a part of a US Department of Education grant the College of Education and Behavioral Sciences Dean's Office is currently involved in an extensive program review of three elementary initial licensure programs: Center for Urban Education in Denver, traditional on-campus PTEP, and the Post Baccalaureate on-campus and Denver-based programs. The evaluation includes analysis of a 1st and 2nd year teacher survey sent to over 600 UNC teachers from the graduating classes of 2004 and 2005, a principal survey, a cooperating teacher survey, and focus-group data from discussions with 1st and 2nd year teachers and their supervising principals. The evaluation will provide data on the needs and strengths of the 1st and 2nd year teachers' performance and will provide possible implications for revision of parts of UNC's initial licensure programs. The final grant report will be completed December 2006.

The College of Education and Behavioral Sciences also studies teacher candidate graduates' employment rates and satisfaction of their graduates' satisfaction through undergraduate and graduate alumni surveys. Each year, UNC Career Services and the Institutional Research and Planning Office, conduct a survey of Bachelor Degree recipients and Advanced Degree recipients from the previous year. Information is sought on employment rates, salary, use of Career Services and graduate school attendance. Data are collected through two mailings and phone contacts twelve months after graduation and then analyzed and prepared into the Alumni Survey Report. Statistics are reported by department and a summary given for each college. The College of Education and Behavioral Sciences uses the survey results to assist currently enrolled and prospective students in selecting academic majors and in making career decisions and in assisting academic departments with their planning and evaluation activities.

The 2003-2004 Undergraduate Alumni Survey was sent to 1,870 graduates and the response rate was 63.9%. The results for all graduates in teaching document that 96.5% are employed or attending graduate school and 78.2% are employed in their preferred field. Elementary licensure graduates report that 97.9% are employed or attending

graduate school and 80.5% are employed in their preferred field. Other overall highlights from the survey report include: 92.3% stated UNC program enhanced ability to get/keep job, 89.3% stated employment is related to major, and 93.7% stated that overall, UNC instructional program met their educational goals. Please access the following link to review the complete survey results: <http://www.unco.edu/careers/undergrad0304.pdf>

The Graduate Alumni Survey for the College of Education and Behavioral Sciences documents that 97.6% of the graduates are employed and 80.4% are employed in their preferred field. The response rate of 751 graduates surveyed was 63.9%. Please access the following link to review the complete survey results: <http://www.unco.edu/careers/grad0304.pdf>

The University would welcome the opportunity to participate with the Department in expanding our assessment of teacher quality. Access to data regarding to teacher effects on student learning would facilitate an analysis of our graduates' performance and the quality of our programs. Currently, these data are unavailable to us because of privacy regulations.

Goal #5: Workforce and Economic Development

Goal 5 (1.1) Institution will invest in the development and delivery of teacher preparation for urban environments, secondary math and science, bilingual and/or ESL licensure at either the elementary or secondary level, elementary education, or special education.

The College of Education and Behavioral Sciences has several programs for education professionals that are particularly successful in responding to the delivery of teacher preparation for urban environments, secondary math and science, bilingual and/or ESL licensure.

The School of Special Education redesigned its entire program to meet new state-required standards and guidelines. The following programs are situated in the School and except for the undergraduate program are all offered in an online format: B.A. Special Education (Generalist Teacher), M.A. Special Education: Generalist Teacher, M.A. Special Education: Early Childhood Special Education Specialist, M.A. Special Education: Visually Impairment Specialist, M.A. Special Education: Deaf/Hard of Hearing Specialist, M.A. Special Education: Gifted and Talented Specialist, M.A. Special Education: Teacher Leadership Specialist, Post Master's Licensure Special Education: Administration, and Ed.D. Special Education.

The new Special Education B.A. with an emphasis in Special Education K-12 Teaching is fully implemented and will help address the shortage of special educators in the state and nation. This program enrolls approximately 180 students. CCHE has granted UNC's request to begin this Special Education K-12 Generalist program in Denver at the UNC Lowry Campus in fall 2007. This is further investment in the higher education priorities identified by the state.

The UNC National Center on Low-Incidence Disabilities continues to provide fast and accurate information to schools and parents about children who are deaf or hard of hearing, blind or visually impaired, or have severe disabilities. The Center provides a Master's Degree in these areas through a virtual campus. In addition, inservice and preservice teachers can take professional development modules on topics related to low-incidence disabilities. Please see the following link for additional information on this Center: <http://nclid.unco.edu/newnclid/>

The college also welcomed the Distance Opportunity Interpreter Training (DO IT) program. Recognizing the right of deaf and hard-of-hearing individuals to equal communication access, this Center designs and delivers quality education for Sign Language Interpreters. Sign language interpreters are acknowledged to be critical communication links between deaf, hard of hearing, deaf/blind, and hearing individuals in terms of accessing various communication events. The critical shortage of qualified interpreters, particularly in rural areas of the nation, is equally recognized.

Addressing the need of providing more ESL endorsed teachers is a focus of two major grants awarded to the College of Education and Behavioral Sciences. A Title III Grant awarded to the Linguistically Diverse Education Program, funded until summer 2007, was written in collaboration with District 6, Centennial BOCES, and Poudre School District. Teachers in middle and secondary schools from those districts are given priority to get the funding for the ESL or Bilingual Endorsement program. A Title VII grant, ending last fall semester, focused on Bilingual Endorsements and also gave priority to District 6 teachers. About 15 teachers who were either then employed or are now employed by the local school district participated in obtaining ESL or Bilingual Endorsements

A shortage of urban teachers is continuing to be addressed by the UNC's Center for Urban Education. The program gives paraprofessionals, mostly from Denver Public Schools, the opportunity to take intensive, accelerated coursework on their way to teacher licensure. The teachers are prepared especially to work in K-6 schools in urban areas. The Center graduated its first cohort in spring 2004. Not only does The Center for Urban Education provide opportunities for diverse field experiences, but the program recruits a diverse candidate population: among the candidates in the four cohorts, for example, 47.5% were ethnic minorities.

In addition to the Center for Urban Education, UNC makes the Post Baccalaureate initial elementary licensure program available at the UNC Lowry Center. The program is for graduate students who have a bachelor's degree in any area. Many candidates in the program are career changers who are interested in working in an urban setting. The program satisfies half of the requirements for a master's degree in elementary education.

The Secondary PTEP prepares teachers in mathematics and science and secondary candidates are also encouraged to earn an ESL endorsement. The College is also

developing a partnership with the Denver Public School District to provide internships to student teachers in shortage teaching areas (math, science, special education, and ESL) who are at an advanced level of independence in their preparation. The highly selective internships, beginning fall 2006, allow the student teacher to become a full-time paid employee of DPS while simultaneously completing the student teaching requirement. The university collaborates with the school district in providing more intensive supervision of individuals completing these internships to ensure the success of the candidate and academic achievement in the classroom.

The UNC Mathematics and Science Teaching (MAST) Institute supports pre-service, in-service and professional development of mathematics and science teachers through a number of federal and state grant initiatives designed to increase teacher preparedness, leadership and content knowledge. The MAST Institute's Center for Learning and Teaching in the West (CLT-W) in collaboration with Colorado State University, Montana State University, the University of Montana, and Portland State University developed a series of on-line graduate courses for K-12 educators, and a research agenda focusing on ways to teach to a diverse student body. Through the state MSP program, MAST has partnered with Colorado State University and school districts in NE Colorado to develop an MA in Natural Sciences (UNC), MA in Middle School Mathematics (UNC), and an MS in Natural Sciences (CSU) for teachers aimed at increasing content knowledge and pedagogical content knowledge in response to No Child Left Behind. Through the NSF funded GK-12 program, MAST has partnered with Colorado State University to provide K-12 teachers in the Poudre R1 and Greeley-Evans District 6 school districts with research internships and courses aimed at increasing content knowledge, and graduate students in science and mathematics opportunities to work with teachers in their K-12 classrooms.

The High Plains Mathematics and Science Partnership has the goal of increasing secondary teacher content knowledge to support NCLB highly qualified status in mathematics and science through graduate education and is specifically targeted mostly at middle level teachers. The program has supported the development of two interdisciplinary programs: a Master's Degree in Natural Science (jointly with CSU) and an MA in middle level mathematics teaching.

The mathematics program has built on successes of earlier professional development projects such as Enhancing Mathematics in Elementary Schools and the Center for Learning and Teaching in the West, and current best practices in mathematics professional development. By institutionalizing the course offerings in the form of a graduate degree, we support teachers not only to learn far more mathematics than they would from attending a few institutes, but also to engage in standards-based implementation, action research and other applications of their mathematics content knowledge to their classrooms. The program currently has 12 students, with several preparing to graduate this year and at least four additional applications in the pipeline.

