



*Preparing Tomorrow's Teachers:*

Are **NEW MEXICO's** education school graduates ready to teach reading and mathematics in elementary classrooms?

September 2009

**AUTHORED BY:**

Julie Greenberg and Sandi Jacobs

**OUR THANKS TO:**

Research Analyst: Alicia Durfee

Database Design and Technical Support: Jeff Hale

Graphic Design: Colleen Hale

**WITH PRINCIPAL FUNDING FROM:**

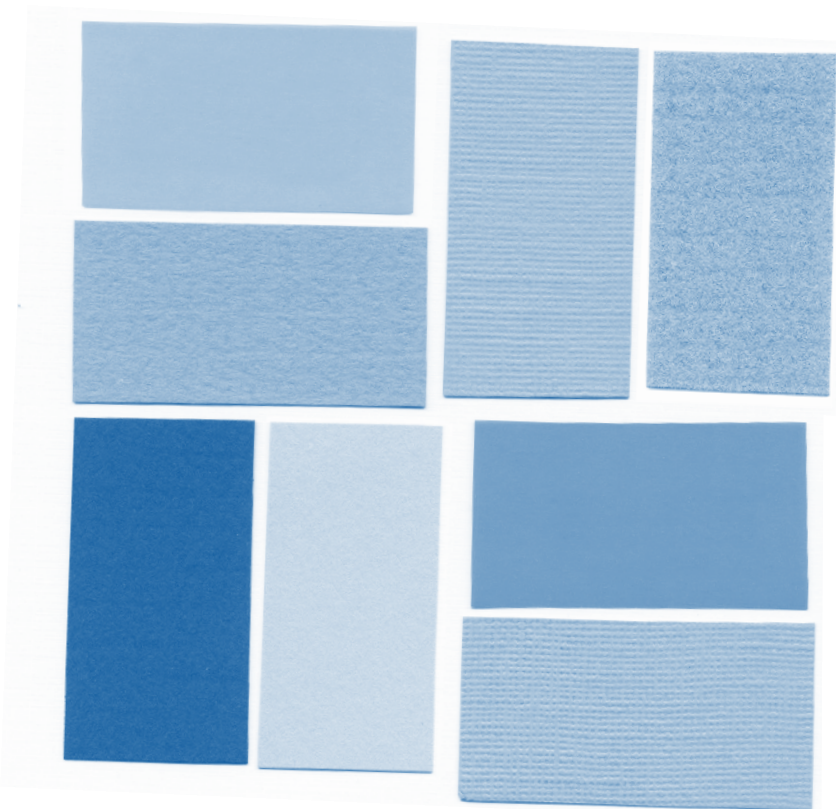
Daniels Fund

**NCTQ BOARD OF DIRECTORS:**

Stacey Boyd, Chester E. Finn, Ira Fishman, Marti Watson Garlett, Jason Kamras, Donald N. Langenberg, Clara M. Lovett, Carol G. Peck, Danielle Wilcox, Kate Walsh, *President*

**NCTQ ADVISORY BOARD:**

Steven J. Adamowski, Michael Barber, Roy E. Barnes, Lawrence S. Braden, Cynthia G. Brown, Andrew Chen, Jo Lynne DeMary, Paula S. Dominguez, Cheryl Ellis, Michael Feinberg, Eleanor Gaines, Michael Goldstein, Eric A. Hanusek, Frederick M. Hess, Paul T. Hill, E.D. Hirsch, Michael Johnston, Frank Keating, Martin J. Koldyke, Wendy Kopp, Amy Jo Leonard, Deborah McGriff, Ellen Moir, Robert H. Pasternak, Michael Podgursky, Michelle Rhee, Stefanie Sanford, Laura Schwedes, Daniel Willingham



## INTRODUCTION

IMPROVING TEACHER EFFECTIVENESS IS HIGH ON THE LIST OF MOST EDUCATION REFORMERS IN NEW MEXICO, AS IT IS NATIONALLY. EFFECTIVE TEACHING IN THE ELEMENTARY YEARS IS OF VITAL IMPORTANCE TO ENSURE NOT ONLY THAT CHILDREN MASTER FUNDAMENTAL SKILLS, BUT THAT PERFORMANCE GAPS NARROW RATHER THAN WIDEN BEYOND REPAIR. WE NOW KNOW THAT DISADVANTAGED STUDENTS CAN CATCH UP ACADEMICALLY WITH THEIR MORE ADVANTAGED PEERS IF THEY HAVE GREAT ELEMENTARY TEACHERS SEVERAL YEARS IN A ROW.

It is for these reasons that the National Council on Teacher Quality (NCTQ), a non-partisan research and advocacy group dedicated to the systemic reform of the teaching profession, evaluates the adequacy of preparation provided by undergraduate education schools. These programs produce 70 percent of our nation's teachers. We think it is crucial to focus specifically on the quality of preparation of future elementary teachers in the core subjects of reading and mathematics.

Teacher preparation programs, or “ed schools” as they are more commonly known, do not now, nor have they ever, enjoyed a particularly positive reputation. Further, there is a growing body of research demonstrating that teacher preparation does not matter all that much and that a teacher with very little training can be as effective as a teacher who has had a lot of preparation. As a result, many education reformers are proposing that the solution to achieving better teacher quality is simply to attract more talented people into teaching, given that their preparation does not really matter.

In some significant ways, we respectfully disagree. NCTQ is deeply committed to high-quality formal teacher preparation, but, importantly, we are not defenders of the *status quo*. We also do not believe that it is a realistic strategy to fuel a profession with three million members nationally by only attracting more elite students. Yes, we need to be much more selective about who gets into teaching, and we strenuously advocate for that goal. But even smart people can become better teachers, particularly of young children, if they are provided with purposeful and systematic preparation.

NCTQ has issued two national reports on the reading and mathematics preparation of elementary teachers in undergraduate education schools. The first, *What Education Schools Aren't Teaching about Reading and What Elementary Teachers Aren't Learning* was released in May 2006.<sup>1</sup> The second, *No Common Denominator: The Preparation of Elementary Teachers in Mathematics by America's Education Schools*, followed just over two years later.<sup>2</sup> These reports provide the methodological foundations for this analysis of teacher preparation in every undergraduate program in New Mexico.

1 [http://www.nctq.org/p/publications/docs/nctq\\_reading\\_study\\_app\\_20071202065019.pdf](http://www.nctq.org/p/publications/docs/nctq_reading_study_app_20071202065019.pdf)

NCTQ has also released a report on reading preparation in elementary and special education programs in all of Indiana's undergraduate schools of education: [http://www.nctq.org/p/publications/docs/nctq\\_full\\_study\\_indiana\\_reading\\_20090304110141.pdf](http://www.nctq.org/p/publications/docs/nctq_full_study_indiana_reading_20090304110141.pdf)

2 [http://www.nctq.org/p/publications/docs/nctq\\_ttmath\\_fullreport\\_20090603062928.pdf](http://www.nctq.org/p/publications/docs/nctq_ttmath_fullreport_20090603062928.pdf)

## AN OVERVIEW OF THE QUALITY OF UNDERGRADUATE ELEMENTARY TEACHER PREPARATION IN NEW MEXICO

EACH YEAR ABOUT 500 WOMEN AND MEN GRADUATE FROM EIGHT COLLEGES LOCATED IN NEW MEXICO WITH CERTIFICATION TO TEACH ELEMENTARY SCHOOL.<sup>3</sup> THESE PREPARATORY PROGRAMS ARE REGULATED BY THE NEW MEXICO PUBLIC EDUCATION DEPARTMENT. THIS DEPARTMENT MUST "APPROVE" THESE PROGRAMS, DETERMINING IF THEY MEET STATE REQUIREMENTS AND PROVIDE A SUFFICIENTLY RIGOROUS CURRICULUM TO CONFER A NEW MEXICO STATE TEACHING LICENSE ON ANYONE WHO SUCCESSFULLY COMPLETES THE COURSE OF STUDY.

In our 2007 *State Teacher Policy Yearbook*, NCTQ found New Mexico's policies related to teacher preparation and licensure to be in need of substantial improvement<sup>4</sup> and our latest edition (forthcoming late in 2009) will show little progress has been made on numerous goals connected to elementary teacher preparation. Some examples include:

- Although it does a better job than most states, New Mexico's content knowledge requirements do not ensure that preparation programs will provide elementary teacher candidates with the broad liberal arts education necessary to be ready to teach to student academic content standards.
- The state does not require teacher preparation programs to prepare new teachers in the science of reading instruction, nor does it test whether new teachers have this critical knowledge before granting licensure.
- The state does not require that applicants to education programs pass at least a test of basic skills. Because New Mexico delays this requirement until teacher candidates have completed their program and are ready to apply for licensure, programs may lower their instructional rigor to accommodate less capable students, including spending valuable preparation time remediating basic skills.
- The state's requirements in the area of professional coursework are more extensive than in many states and the state does not cap the amount of professional coursework that programs can require. Such requirements have ballooned; in at least one program, the equivalent of two full majors is required.<sup>5</sup>

<sup>3</sup> Certification is actually for grades K-8. There were 525 graduates in 2008 from teacher preparation programs at: The College of Santa Fe (now in dire fiscal straits, if not bankrupt), the University of the Southwest, Eastern New Mexico University, New Mexico Highlands University, New Mexico State University, Northern New Mexico College, Western New Mexico University and the University of New Mexico. The University of Phoenix and Western Governors University also offer online teacher preparation in New Mexico, but are not included in this study because they are not headquartered in the state.

<sup>4</sup> [http://www.nctq.org/stpy/reports/stpy\\_newmexico.pdf](http://www.nctq.org/stpy/reports/stpy_newmexico.pdf)

<sup>5</sup> New Mexico State University

- The state does meet the goal of keeping its program approval process wholly separate from accreditation by one of the two national accrediting bodies, National Council for Accreditation of Teacher Education (NCATE) or Teacher Education Accreditation Council (TEAC). Neither of these organizations has been able to demonstrate that an accredited program has met a higher-quality standard than one that is not accredited.<sup>6</sup>

While this study does not cover all of these challenges, the state's regulatory framework provides important context for the focus of this paper. State regulatory weaknesses undoubtedly account for some program deficiencies, but we would argue they do not excuse them. There are no legitimate impediments to individual preparation programs filling any vacuum left by the state, and in a few cases, programs do just that. For example, even though the state requires that teacher candidates pass a basic skills test as a condition of licensure and not as a condition of admission to a teacher preparation program, every New Mexico program requires that applicants take the New Mexico Assessment of Teacher Basic Skills before or within one semester of admission.

## SCOPE OF THIS ANALYSIS

WE EVALUATED NEW MEXICO'S EIGHT UNDERGRADUATE ELEMENTARY TEACHER PREPARATION PROGRAMS ACROSS FOUR CRITICAL AREAS:

- Admission standards
- Teacher preparation in reading
- Teacher preparation in elementary mathematics
- Exit standards

### METHODOLOGY: ADMISSION STANDARDS

Most teacher preparation programs in the U.S., even those housed in departments rather than professional schools, have an application process that takes place at the end of the sophomore or beginning of the junior year of undergraduate education. This application process presents an opportunity to select only candidates that meet high standards. Unfortunately, in programs across the nation, not just in New Mexico, this is an opportunity that is currently squandered. Most of the nation's teachers come from the bottom third of high school graduates going to college. In contrast, countries whose students outperform ours consistently attract more elite students, the top five percent in South Korea, the top 10 percent in Finland and the top 30 percent in Singapore.<sup>7</sup>

New Mexico does not require that teacher preparation programs have any admission standards, but the eight programs do utilize the state's basic skills test for that purpose. However, the end result is probably not much different than in states that do not have such requirements: very little improvement in the pool of teacher candidates.

6 See A. Levine, "Educating School Teachers, (Washington, D.C.: The Education Schools Project, 2006) 61-70.

7 McKinsey & Co., "How the World's Best-Performing School Systems Come Out on Top," (September 2007). 16.



As in the 30 states that require that applicants take the Praxis I (a basic skills test developed by ETS), New Mexico's basic skills test assesses knowledge of mathematics, reading and writing that is typically acquired in sixth or seventh grade. Given the fact that these questions should not be difficult for high school graduates, one would expect that minimum passing scores would represent getting a high percentage of items correct. This is not the case on the Praxis I. For instance, on the math portion of the Praxis, the highest minimum passing score set by any state ensures that no more than 63 percent of items are answered correctly, and most states allow test-takers to pass when answering considerably fewer items correctly.

New Mexico does not make public nor did the test publisher respond to our request for information on the approximate range of items answered correctly that is represented by the passing score of 240.<sup>8</sup> Using Praxis I scoring information as a reference point, we estimate that a score of 240 represents no more than 33 percent to 45 percent of questions answered correctly.<sup>9</sup> If our estimate is correct, many teacher candidates passing New Mexico's basic skills test do not demonstrate middle school level proficiency, much less the level of proficiency that future elementary teachers should be able to demonstrate upon graduation or through remediation in their first few years of college.<sup>10</sup>

In rating admission standards, we evaluate whether programs limit teacher preparation programs to candidates in the top half of high school students going to college.<sup>11</sup> To determine if this standard is met, we first look at the selectivity of the college or university of which each program is a part, as rated by *U.S. News and World Report*. Programs in colleges that are "more selective" or "most selective" meet the standard, since applicants to the teacher preparation programs have already met the college's rigorous admission standards. No New Mexico teacher preparation programs are housed in institutions that are "more" or "most selective." For programs in colleges or universities with lower selectivity, we then look at whether the program uses a standardized test for admission that is designed to identify the appropriate level of academic proficiency.<sup>12</sup>

#### METHODOLOGY: STANDARDS FOR TEACHER PREPARATION IN READING

Student reading achievement in New Mexico remains a chronic problem, one that is unfortunately shared throughout the country. On the most recent National Assessment of Educational Progress (NAEP) assessments, 76 percent of New Mexico fourth graders and 83 percent of New Mexico eighth graders read below the proficient level.<sup>13</sup> This is well below the national average. Over the past 60 years,

8 Telephone conversation and correspondence on August 11 and August 12, 2009 with Pearson Education's Evaluation Systems Group.

9 The 82nd percentile on the math portion of the Praxis I represents correct answers on somewhere between 33 percent and 45 percent of questions. Since over 88 percent of New Mexico's teacher candidates pass the state's basic skills test on their first try, and the pool of test-takers is presumably not more proficient than the national pool of Praxis I test-takers, it's fair to assume that the percent of questions answered correctly on New Mexico's test is close to that very low range found in Praxis I scoring.

10 For recommendations on mathematics standards for admission, see [http://www.nctq.org/p/docs/nctq\\_nmsi\\_stem\\_initiative.pdf](http://www.nctq.org/p/docs/nctq_nmsi_stem_initiative.pdf).

11 This is not the same as a standard that selects for the top half of students seeking to become teachers.

12 To illustrate that a "selective" rating for an institution may not be sufficient as a screen for admissions to an education school, note that the middle 50 percent of students at the University of New Mexico, which has the largest number of teacher graduates of New Mexico's four "selective" colleges, had sums of SAT Critical Reading and Math scores of 930 to 1200. The nation's average SAT score sum in 2008 was 1017.

13 See <http://www.nces.ed.gov/nationsreportcard/states/profile.asp>

scientists from many fields have worked to determine how people learn to read and why some people struggle. This science of reading has led to a number of breakthroughs that can dramatically reduce the number of children destined to become functionally illiterate or barely literate adults. By routinely applying the lessons learned from the scientific findings in the classroom, most reading failure could be avoided. It is estimated that the current failure rate of 20 to 30 percent could be reduced to the range of 2 to 10 percent.

Despite the overwhelming evidence, educators have been slow to adopt these scientifically based practices. In our first national study of teacher preparation in a representative sample of 72 institutions, we found that only 15 percent were teaching the five instructional components of the science of reading (phonemic awareness, phonics, fluency, vocabulary and comprehension) in even the most rudimentary sense.

Our rating of New Mexico's teacher preparation programs on reading preparation uses the same methodology employed in our national study. Programs are reviewed to determine whether instruction is provided on the five components of the science of reading in any reading course required of students who aspire to teach kindergarten through grade eight. We looked for such evidence both in course syllabi and in reviewing each of the required textbooks. (To date, we have reviewed over 600 such textbooks.) When we encountered any sort of ambiguity, we always gave the school the benefit of the doubt.

We understand that a course's intended goals and topics as reflected by syllabi and textbooks may differ from what actually happens in the classroom. However, it is reasonable to assume that college professors give thought and consideration to their syllabi and course readings, which represent the intended structure of their courses and emphasize what they view as essential knowledge. If anything, less—not more—of what the syllabi and texts suggest is apt to be covered in class.

Nonetheless, in recognition of the inherent limitations of our methodology, we always invite programs to submit additional materials. Only one did so.

Reviews of both the reading textbooks used in New Mexico and the recommended textbooks not used in the state can be found in Appendix A, following the program ratings. Our national study contains more information on the science of reading and the methodology used in evaluating reading preparation.<sup>14</sup>

## **METHODOLOGY: STANDARDS FOR TEACHER PREPARATION IN MATHEMATICS**

Compared to their counterparts in other countries, the performance of American students in mathematics is mediocre. In turn, compared to their counterparts in other states, the performance of New Mexico's students in mathematics is worse than mediocre. On the most recent NAEP, 76 percent of New Mexico fourth graders and 82 percent of New Mexico eighth graders had mathematics scores below the proficient level.<sup>15</sup> This is well below the national average. Since mathematics knowledge is cumulative, a critical step in improving this performance is the foundation laid throughout elementary school. Achieving results there is directly linked to the capability of elementary teachers to provide effective instruction in mathematics.

<sup>14</sup> [http://www.nctq.org/p/publications/docs/nctq\\_reading\\_study\\_app\\_20071202065019.pdf](http://www.nctq.org/p/publications/docs/nctq_reading_study_app_20071202065019.pdf)

<sup>15</sup> See <http://www.nces.ed.gov/nationsreportcard/states/profile.asp>

There is increasing consensus that prospective elementary teachers – who are notoriously weak in mathematical competency – are best trained by college mathematics courses that are designed specifically for teachers and that impart a deep understanding of elementary and middle school mathematics concepts. A calculus or statistics course is fine to take as an elective, but numerous professional organizations and mathematicians recommend that aspiring elementary teachers take three semester courses in “elementary mathematics content.”<sup>16</sup> These courses should cover four subject areas: numbers and operations, algebra, geometry and measurement, and – to a lesser degree – data analysis and probability.

Despite this emerging consensus on how to prepare elementary teachers to be truly competent mathematics instructors, there is enormous variability in the nature of coursework requirements among education schools in the U.S. Our second national study of teacher preparation in a representative sample of 77 institutions found that only 13 percent were doing an adequate job.

NCTQ's rating of New Mexico's teacher preparation programs on mathematics preparation is based on examination of syllabi and required primary textbooks in coursework designed for teacher audiences. These materials were used to assess whether the coursework covers essential topics in mathematics and devotes sufficient time to those topics. It should be noted that there are far fewer mathematics textbooks than reading textbooks: About a dozen mathematics textbooks are chosen for use repeatedly, whereas the number of reading textbooks we have reviewed for our studies now totals approximately 600, with no end to new ones in sight.

As in the case of reading preparation, we believe that the syllabi and textbooks capture the scope of knowledge that the professor thinks is important, but we would have supplemented our review with any additional materials had programs provided them to us in response to our solicitation. Only one did so. Again, as in the case of our reading analysis, our evaluations in mathematics preparation were generous, always giving a program the benefit of the doubt if we encountered any ambiguity.

Reviews of both elementary content mathematics textbooks used in New Mexico and recommended textbooks not used in the state can be found in Appendix B. Our national study contains more information on the elementary content coursework that is recommended for elementary teacher preparation and the methodology used to evaluate that preparation.<sup>17</sup>

## METHODOLOGY: EXIT STANDARDS

If elementary teachers are to teach well, they must acquire many essential teaching skills as well as a solid understanding of content. Licensing examinations are required by states to ensure that teachers meet a minimum standard for subject-matter knowledge. Unfortunately, for a number of reasons that we will enumerate, most current elementary teacher licensing examinations now used in the U.S. are not up to the task. In lieu of sufficient exit standards required by the state, elementary teacher preparation programs that have a serious commitment to ensuring the quality of their graduates should have their own exit examinations.

<sup>16</sup> We also recommend that aspiring elementary teachers take a semester course dealing with methods of teaching mathematics at the elementary level (not a methods course that addresses multiple subjects and/or multiple grade spans). Our rating process does not, however, include consideration of methods coursework.

<sup>17</sup> [http://www.nctq.org/p/publications/docs/nctq\\_ttmath\\_fullreport\\_20090603062928.pdf](http://www.nctq.org/p/publications/docs/nctq_ttmath_fullreport_20090603062928.pdf)



New Mexico requires that all aspiring elementary teachers pass the New Mexico Content Knowledge Assessment: Elementary Education test to receive a license.<sup>18</sup> While the fact that only a few practice problems related to this test are made publicly available makes it difficult to develop a complete critique of this assessment, it is nonetheless possible to say that its structure and scoring is fundamentally flawed.

A candidate's score on the New Mexico licensing test represents a composite of his or her performance in five different areas (reading instruction/language arts,<sup>19</sup> literature and the arts, mathematics, science and social studies). While area subscores are computed and reported, passing scores are not established for each specific subject area. To achieve an overall passing score, it is not necessary to do well on all areas of the test, as if a newly hired teacher can be excused from having to teach each subject with at least a minimum level of competence. For example, it may be possible to answer almost every mathematics problem incorrectly and still pass the test.

New Mexico's Content Knowledge Assessment for elementary teachers is also almost certainly inadequate because it appears to test content understanding at only the elementary and middle school level. To teach mathematics well to an elementary student requires more than a superficial understanding that barely exceeds what is taught. Further, although it is not possible to evaluate the reading content of New Mexico's assessment based on the limited information available, it appears highly unlikely that it appropriately measures candidates' knowledge of the science of reading, absent standards or coursework requirements directing preparation programs to include this critical content.

Because this licensure test is not adequate to the task of ensuring that elementary teachers have acquired the necessary knowledge, New Mexico should develop a better test or adopt assessments in use in other states. No state has developed rigorous licensing tests with separate passing scores for every subject taught in elementary school, but a few states have made progress on the important subjects of reading and mathematics. Massachusetts and Virginia have rigorous, stand-alone tests of reading pedagogy. Massachusetts has also developed a rigorous, stand-alone mathematics test.<sup>20</sup>

In the absence of an adequate state licensing test, it is incumbent upon New Mexico's teacher preparation programs to use their own series of exit tests to verify that graduates meet acceptable levels of performance. Because no program in the state currently reports having an exit test, every program received a failing grade on this standard.

#### OTHER DATA REPORTED

Although the state does not require any New Mexico preparation program to obtain accreditation, some have done so and we note on each rating sheet whether programs have been accredited by NCATE or TEAC. Our indication of the type of accreditation does not represent a rating of any kind, as there is no evidence that links accreditation to higher-quality preparation or that shows it has the effect of improving preparation.

18 A pedagogy test (the New Mexico Assessment of Teacher Competency: Elementary Level) is also required.

19 New Mexico's Content Knowledge Assessment includes knowledge of reading instruction, which would more accurately fall under the heading of pedagogy than content knowledge. While New Mexico also requires a pedagogy assessment, it appears, like many states, to rely solely on the content test to measure candidates' knowledge of reading instruction.

20 <http://www.doe.mass.edu/news/news.asp?id=3801>

Each rating sheet also identifies the three opportunities we afforded the eight preparation programs to provide us with comments or additional course materials relevant to our evaluation.

The first letter asked that programs confirm that we had correctly identified the proper reading and mathematics coursework for our analyses. Four did so.

In a second mailing, we sent the preliminary results of our analyses in reading and mathematics preparation to the programs. They were asked to provide any additional materials that might lead us to alter our rating. As already noted, only one elected to do so.

Our last letter solicited general comments of any kind. Responses from programs are found in Appendix C.

## FINDINGS

### NEW MEXICO'S TEACHER PREPARATION PROGRAMS HAVE ADMISSION STANDARDS THAT ARE SO LOW AS TO BE MEANINGLESS.

Rather than attempting to screen for the top half of college-bound high school graduates, New Mexico's education schools are setting a low bar in a pool of students in the lower third of college-bound high school graduates. Because of the relatively low levels of selectivity of their colleges, every education program in New Mexico faces a higher hurdle in screening for truly proficient teacher candidates, and none meets that challenge.

### MOST PREPARATION PROGRAMS IN NEW MEXICO DO NOT PREPARE CANDIDATES TO TEACH THE SCIENCE OF READING.

Only one of New Mexico's eight preparation programs provides training to teacher candidates in all five components of effective reading instruction. Of the remaining programs, three provided training in only reading comprehension, and the other four programs did not provide any exposure to any of the five components. Thus, nearly all of New Mexico's programs provide no preparation in phonemic awareness, phonics, vocabulary development or fluency.

### PROGRAMS USE A WIDE VARIETY OF READING TEXTBOOKS, MOST OF WHICH DO NOT ADDRESS THE SCIENCE OF READING.

We found approximately 20 reading textbooks in use in New Mexico's eight preparation programs. The quality of almost all of the required reading texts is poor. Their content includes little to none of the science of effective reading instruction, and, in many cases, the content is inaccurate and/or misleading. Interestingly, the one program providing teachers with adequate exposure to the science of reading relied on a course packet with materials drawn from numerous research journals and publications, rather than a standard textbook.

### ONLY ONE NEW MEXICO PREPARATION PROGRAM SATISFACTORILY COVERS THE MATHEMATICS CONTENT THAT ELEMENTARY TEACHERS NEED; HOWEVER, THIS RATING DOES NOT EXTEND TO PREPARATION FOR GRADES SEVEN AND EIGHT. FIVE PROGRAMS ARE SERIOUSLY DEFICIENT. ALGEBRA PREPARATION IS UNIVERSALLY INADEQUATE.

New Mexico mirrors the results in our national study in terms of variation in the number and nature of mathematics courses required of aspiring elementary teachers. Three of the programs need to add more coursework and four others need both to add coursework and improve that coursework's focus and textbook support. Of those four, two programs need to remedy the deficiency of requiring no elementary content coursework at all.

Attention to algebra is as paltry in New Mexico as we found nationally: On average, the state's prospective elementary teachers are shortchanged 23 hours on the algebra instruction needed to adequately prepare their elementary students for middle school mathematics.

#### ONLY ONE OF NEW MEXICO'S PREPARATION PROGRAMS HAS SELECTED A STRONG TEXTBOOK FOR MATHEMATICS CONTENT COURSEWORK.

Whereas 35 percent of programs in our national study used textbooks that we rated as adequate in the four critical subject areas, only one program in New Mexico (13 percent) did so. Of the five programs that have not selected adequate textbooks, four use a textbook that is weak in algebra and one program uses either no textbook or a textbook that is weak in all areas. (For two programs, the issue of textbook quality is irrelevant because they do not require any elementary mathematics coursework.)

#### ALL OF NEW MEXICO'S PREPARATION PROGRAMS HAVE A DEDICATED ELEMENTARY MATHEMATICS METHODS COURSE.

Only half of the programs in our national study required a three-credit course in mathematics methods, so this finding might seem to represent a strong showing for New Mexico's programs. However, all of these methods courses cover both elementary and middle school mathematics methods due to the fact that New Mexico's programs provide K-8 certification. While universally requiring this coursework is a plus, our endorsement is conditional -- the broad grade span of these courses makes for insufficient attention paid to elementary mathematics methods.

#### NO PREPARATION PROGRAM IN THE STATE ENSURES THAT ASPIRING ELEMENTARY TEACHERS KNOW THE SCIENCE OF READING INSTRUCTION AND UNDERSTAND ELEMENTARY MATHEMATICS CONTENT AT A DEPTH THAT IS SUFFICIENT FOR INSTRUCTION.

The unequivocal weakness of the Content Knowledge Assessment: Elementary Education content test as an assessment of the capacity to teach elementary school necessitates that New Mexico's preparation programs develop and use exit assessments that do so. No program has recognized this need and responded to it.

## RECOMMENDATIONS

### STATES

It falls to states to spearhead improvement of education schools by better exercising the oversight authority that they already hold. Most education schools or departments will only be able to overcome possible internal resistance or resistance from other departments in their institutions if reform is statewide.

THE NEW MEXICO PUBLIC EDUCATION DEPARTMENT SHOULD ESTABLISH ENTRANCE STANDARDS FOR THE STATE'S TEACHER PREPARATION PROGRAMS TO ENSURE THAT EVERY ASPIRING TEACHER ENTERS POSSESSING APPROPRIATE READING, WRITING AND MATHEMATICAL SKILLS. THESE ENTRANCE STANDARDS SHOULD INCLUDE ACCEPTABLE SCORES ON STANDARDIZED ASSESSMENTS SUCH AS THE COLLEGIATE ASSESSMENT OF ACADEMIC PROFICIENCY.<sup>21</sup>

With few exceptions, there is a quite plausible perception among education schools that they cannot individually raise their admission standards without putting themselves at a disadvantage in the competition for students. The pressure these institutions face to accept a sufficient number of students makes it incumbent upon states to raise the bar for all education schools, not just relegate the task to a few courageous volunteers.

The fact that a large and increasing number of teacher candidates applying for admission to teacher preparation programs are transferring from two-year institutions further underscores the need to establish a uniform threshold for admission.

The argument that this will lead to shortages of teacher candidates is a red herring commonly offered to resist change. A significant problem in the profession is that more talented students eschew teacher preparation because the programs are perceived as unchallenging and dull, instead entering teaching through alternate routes. Programs can teach to a higher standard and still produce the number of teachers needed by elementary schools, as Massachusetts has found since 2001-2002, when new and more rigorous requirements and assessments began to be phased in.

THE NEW MEXICO PUBLIC EDUCATION DEPARTMENT SHOULD DEVELOP STRONG COURSE STANDARDS IN READING AND MATHEMATICS AND ADOPT WHOLLY NEW ASSESSMENTS TO TEST FOR THOSE STANDARDS.

New Mexico currently requires elementary teacher candidates to complete six credits of study in reading and nine credits of study in mathematics, but does not specify that the reading coursework should include study of the five essential components of reading instruction nor that the mathematics coursework should cover elementary mathematics. However, even a combination of standards and coursework requirements does not prevent education schools from deciding independently, and all too often inappropriately, what should be taught. Absent a test, there is no assurance that education schools are teaching to the necessary standards.

21 The state's high school exit test, the New Mexico High School Competency Exam, is a basic skills test that is not aligned with high school academic standards; it cannot serve this purpose. The Collegiate Assessment of Academic Proficiency (CAAP) is the standardized, nationally normed assessment program from ACT designed to be administered after a student's sophomore year that enables postsecondary institutions to assess and evaluate the outcomes of their general education programs. A test such as the CAAP, designed for the general college-going population, is better for identifying the appropriate level of academic proficiency than a test designed solely for use by prospective teachers.

For an example of a regulatory framework that ensures that elementary teachers are prepared to teach the science of reading, New Mexico should look to Virginia or Massachusetts. Virginia requires all teacher candidates to complete coursework that focuses on the science of reading and to pass a reading exam. Massachusetts has standards that clearly address the science of reading and also requires all elementary candidates to pass a reading exam. The tests offered by both Virginia and Massachusetts have been rated as among a very small number that actually verify teacher candidates' knowledge of the science of reading.<sup>22</sup>

Massachusetts is also a model for developing a regulatory framework that accomplishes these goals in the area of mathematics preparation. Our national study of the preparation of elementary teachers in mathematics discusses Massachusetts' regulations and assessment in some detail.<sup>23</sup>

THE NEW MEXICO PUBLIC EDUCATION DEPARTMENT SHOULD ELIMINATE ITS GRADE K-8 CERTIFICATION. THIS CERTIFICATION ENCOURAGES EDUCATION SCHOOLS TO BROADLY PREPARE TEACHERS, WHILE REQUIRING TOO FEW COURSES SPECIFIC TO TEACHING ANY GRADE SPAN.

While grade K-8 preparation is theoretically possible, institutions devote fewer courses than would be needed to provide sufficient preparation for all of these grades regardless of whether prospective teachers are required to have an area of concentration. The majority of states no longer allow this certification.

## EDUCATION SCHOOLS

### TO IMPROVE READING PREPARATION

1. Build faculty expertise in the science of reading. Whether the lack of teacher preparation in the science of reading is due to philosophical opposition or unawareness of the research science, education schools must have the expertise to deliver scientifically based reading coursework.

### TO IMPROVE MATHEMATICS PREPARATION

1. Education schools should require three mathematics courses addressing elementary and middle school topics and one mathematics methods course focused on elementary topics and numbers and operations in particular.<sup>24</sup>

22 S. Stotsky, "Why American Students Do Not Learn to Read Very Well: The Unintended Consequences of Title II and Teacher Testing," Third Education Group Review Vol. 2 No. 2 (2006); and D. W. Rigden, "Report on Licensure Alignment with the Essential Components of Effective Reading Instruction" (Washington, D.C.: Reading First Teacher Education Network, 2006).

23 See p. 54 of the report at [http://www.nctq.org/p/publications/docs/nctq\\_ttmath\\_fullreport\\_20090603062928.pdf](http://www.nctq.org/p/publications/docs/nctq_ttmath_fullreport_20090603062928.pdf)

24 This recommendation is a relatively easy fix. In all but two of New Mexico's preparation programs, aspiring elementary teachers are currently required to take at least one general-audience mathematics course. Those programs that require fewer than eight credits of elementary mathematics coursework can quickly move toward meeting this standard without increasing coursework burdens by requiring more elementary content coursework instead of general-audience coursework. As the mathematical foundations of prospective teachers improve with higher entrance standards, less elementary content coursework may be required.



- 
- |   |   |
|---|---|
| <p>2. Ensure that the overall program design allows for sufficient and proper coverage of reading instruction, with a coordinated sequence of teacher training in reading. Too many programs have courses with repeated or overlapping content, while significant topics go unaddressed.</p>  | <p>2. Teacher preparation programs should make it possible for an aspiring teacher to test out of mathematics content course requirements. Current licensing tests are inadequate, but a new generation of standardized tests that can evaluate mathematical understanding at the requisite depth may soon be available.</p>  |
| <p>3. Provide guidance to help instructors select strong textbooks from the vast number of available options. The wide range of textbooks in use means that teacher candidates are exposed to different but inaccurate, incomplete, and often misleading accounts of reading instruction.</p> | <p>3. Algebra must be given higher priority in elementary content instruction. While elementary teachers do not deal explicitly with algebra in their instruction, they need to understand it as the generalization of the arithmetic they address while studying numbers and operations. They also need to be aware of algebra's connection to many of the patterns, properties, relationships, rules and models that will occupy their elementary students.</p> |
- 

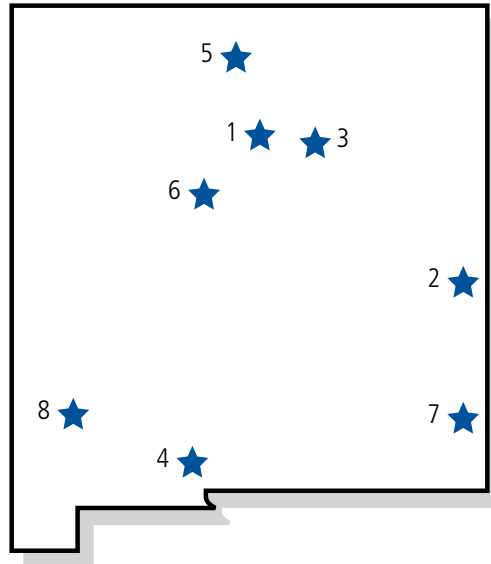
### INSTITUTIONAL ADMINISTRATORS AND TEACHER EDUCATION PROGRAMS

Unlike teacher preparation in reading, which is typically contained in the education school, preparation in mathematics usually involves both the education school and the mathematics department. For that reason, university administrators must take the lead in orchestrating the interdepartmental communication, coordination, and innovation necessary for coherent preparation of elementary teachers for mathematics instruction.

By itself, leadership from the education department is not sufficient for improving instruction in the content courses elementary teachers need in mathematics. Mathematics departments must find the means to staff elementary content courses with instructors who have adequate professional preparation in mathematics and ensure that instruction is rigorous and relevant. These instructors might find helpful the syllabi, lecture notes and other resources we have posted at [www.nctq.org/resources/math](http://www.nctq.org/resources/math).



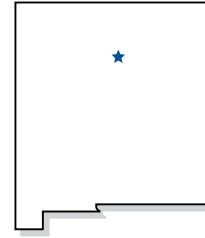
## PROGRAM RATINGS



1. College of Santa Fe, Santa Fe
2. Eastern New Mexico University, Portales
3. New Mexico Highlands University, Las Vegas
4. New Mexico State University, Las Cruces
5. Northern New Mexico College, El Rito
6. The University of New Mexico, Albuquerque
7. University of the Southwest, Hobbs
8. Western New Mexico University, Silver City



**College of Santa Fe**  
 Santa Fe, New Mexico  
 Education Department



NCTQ  
 Elementary  
 Teacher  
 Preparation  
 Program  
 Ratings

2009

**I. Admission standards**

**Comments:** The college is not “more” or “most selective” in its admissions. Education majors are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

**II. Teacher preparation in reading**

**Areas of weakness:** No preparation is provided in the science of reading.

**Remedy:** Coursework should address instruction in phonemic awareness, phonics, fluency, vocabulary and comprehension strategies.

**Textbooks:** *Literacy for the 21st Century: A Balanced Approach* (4th ed) by Gail E. Tompkins;  
*Word Identification Strategies: Building Phonics into a Classroom Reading Program* (4th ed) by Barbara J. Fox

**III. Teacher preparation in mathematics**

**Areas of weakness:** No elementary content mathematics coursework is required.

**Remedy:** Adequate coursework with appropriate focus and strong textbook support.

**Comments:** Elementary mathematics methods receive inadequate attention in a course that covers methods at both the elementary and middle school level.

**IV. Exit standards**

**Comments:** The inadequacy of New Mexico’s Content Knowledge Assessment for elementary teachers (which serves as New Mexico’s licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

**Accreditation:** NCATE                      TEAC                      None ✓

**Number of elementary teachers produced: 35** (5th highest producer in state)

Data are from 2007-08, the most recent available from the National Center for Education Statistics.

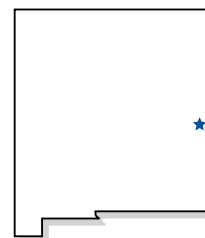
**Opportunities for institution to respond:** Correspondence: April 8, 2009; July 7, 2009; August 13, 2009

Ratings: ● Meets standard   ● Nearly meets standard   ● Partly meets standard   ● Meets a small part of standard  
 ○ Fails to meet standard   ? Cannot be determined   NA Not applicable

## Eastern New Mexico University

Portales, New Mexico

College of Education and Technology



NCTQ  
Elementary  
Teacher  
Preparation  
Program  
Ratings



### I. Admission standards ○

**Comments:** The university is not “more” or “most selective” in its admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

### II. Teacher preparation in reading ●

**Areas of strength:** Coursework includes preparation to teach comprehension strategies.

**Areas of weakness:** No evidence that coursework includes preparation to teach phonemic awareness, phonics, fluency and vocabulary strategies.

**Remedy:** Provide training in all five components of effective reading instruction.

**Textbooks:** *Guiding Readers and Writers, Grades 3 - 6: Teaching Comprehension, Genre, and Content Literacy* by Irene C. Fountas and Gay Su Pinnell, *Literacy for the 21st Century: A Balanced Approach* (4th ed) by Gail E. Tompkins, *Teaching Phonics and Word Study In The Intermediate Grades: A Complete SourceBook* by Wiley Blevins

### III. Teacher preparation in mathematics ●

**Areas of weakness:** Coursework lacks depth.

**Remedy:** Additional coursework.

**Textbooks:** *Mathematics for Elementary Teachers: A Contemporary Approach* (8th ed) by Gary L. Musser, William F. Burger, Blake E. Peterson

**Comments:** Our rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8.

Elementary mathematics methods receive inadequate attention in coursework that covers methods for all subjects at both the elementary and middle school level.

### IV. Exit standards ○

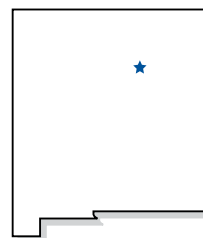
**Comments:** The inadequacy of New Mexico’s Content Knowledge Assessment for elementary teachers (which serves as New Mexico’s licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

Ratings: ● Meets standard ● Nearly meets standard ● Partly meets standard ● Meets a small part of standard  
○ Fails to meet standard ? Cannot be determined NA Not applicable





**New Mexico Highlands University**  
Las Vegas, New Mexico  
**School of Education**




---

**I. Admission standards**

**Comments:** The university is not “more” or “most selective” in its admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

---

**II. Teacher preparation in reading**

**Areas of weakness:** No preparation is provided in the science of reading.

**Remedy:** Coursework should address instruction in phonemic awareness, phonics, fluency, vocabulary and comprehension strategies.

**Textbooks:** *Reading and Learning to Read* (6th ed) by Jo Anne L. Vacca, et al.

**Comments:** Rating is based on “more selective” university admissions.

---

**III. Teacher preparation in mathematics**

**Areas of weakness:** Coursework lacks depth.

**Remedy:** Additional coursework.

**Textbooks:** *Mathematics for Elementary Teachers: A Conceptual Approach* (7th ed) by Albert B. Bennett, Jr. and L. Ted Nelson

**Comments:** Our rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8.

Elementary mathematics methods receive inadequate attention in a course that covers methods at both the elementary and middle school level.

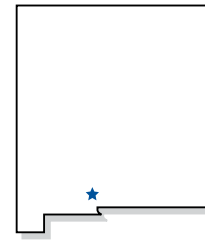
---

**IV. Exit standards**

**Comments:** The inadequacy of New Mexico’s Content Knowledge Assessment for elementary teachers (which serves as New Mexico’s licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

Ratings:  Meets standard  Nearly meets standard  Partly meets standard  Meets a small part of standard  
 Fails to meet standard  ? Cannot be determined **NA** Not applicable





### I. Admission standards ○

**Comments:** The university is not “more” or “most selective” in its admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

### II. Teacher preparation in reading ○

**Areas of weakness:** No preparation is provided in the science of reading.

**Remedy:** Coursework should address instruction in phonemic awareness, phonics, fluency, vocabulary and comprehension strategies.

**Textbooks:** *Literacy Assessment of Second-Language Learners* by Sandra Rollins Hurley and Josefina Villamil Tinajero, *Literacy and Bilingualism: A Handbook for ALL Teachers* (2nd ed) by Maria Estela Brisk and Margaret M. Harrington, *Literate Lives: Teaching Reading and Writing in Elementary Classrooms* by Amy Seely Flint, *Reading the Naked Truth: Literacy, Legislation, and Lies* by Gerald Coles

### III. Teacher preparation in mathematics ●

**Areas of weakness:** Coursework does not cover essential topics and lacks depth; textbook.

**Remedy:** Additional coursework with better focus and textbooks.

**Textbooks:** One course does not use a textbook and one course uses a methods textbook (*Elementary and Middle School Mathematics: Teaching Developmentally*, 4th ed, by John A. Van de Walle)

**Comments:** Our rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8. The program has indicated that it will be increasing requirements in mathematics in fall 2010, but has not indicated the nature of the coursework that will be required.

Elementary mathematics methods receive inadequate attention in a course that covers methods at both the elementary and middle school level.

Ratings: ● Meets standard   ● Nearly meets standard   ● Partly meets standard   ● Meets a small part of standard  
○ Fails to meet standard   ? Cannot be determined   NA Not applicable



**IV. Exit standards**



**Comments:** The inadequacy of New Mexico's Content Knowledge Assessment for elementary teachers (which serves as New Mexico's licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

**Accreditation:**    **NCATE** ✓                      **TEAC**                      **None**

**Number of elementary teachers produced: 149** (2nd highest in state)

Data are from 2007-08, the most recent available from the National Center for Education Statistics.

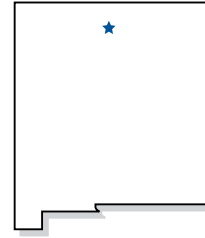
**Opportunities for institution to respond:** Correspondence: April 8, 2009; August 4, 2009; August 13, 2009

Ratings: ● Meets standard   ● Nearly meets standard   ● Partly meets standard   ● Meets a small part of standard  
○ Fails to meet standard   ? Cannot be determined   **NA** Not applicable

## Northern New Mexico College

El Rito, New Mexico

College of Education



NCTQ  
Elementary  
Teacher  
Preparation  
Program  
Ratings



### I. Admission standards ○

**Comments:** The college is not selective in its undergraduate admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

### II. Teacher preparation in reading ●

**Areas of strength:** Coursework includes preparation to teach comprehension strategies.

**Areas of weakness:** No evidence that coursework includes preparation to teach phonemic awareness, phonics, fluency and vocabulary strategies.

**Remedy:** Provide training in all five components of effective reading instruction.

**Textbooks:** *Guiding Readers and Writers, Grades 3 - 6: Teaching Comprehension, Genre, and Content Literacy* by Irene C. Fountas and Gay Su Pinnell, *Literacy for the 21st Century: A Balanced Approach* (4th ed) by Gail E. Tompkins

### III. Teacher preparation in mathematics ●

**Areas of weakness:** Coursework does not cover essential topics and lacks depth. Data analysis receives a disproportionate share of instructional time.

**Remedy:** Additional coursework with better focus and textbooks.

**Textbooks:** *Mathematics for Elementary Teachers: A Contemporary Approach* (8th ed) by Gary L. Musser, William F. Burger, Blake E. Peterson

**Comments:** Our rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8.

This coursework attempts to prepare prospective teachers to handle data analysis problems raised in the course of evaluating student assessment information. This would be better handled in a course dedicated to assessment issues.

Elementary mathematics methods receive inadequate attention in a course that covers methods at both the elementary and middle school level.

### IV. Exit standards ○

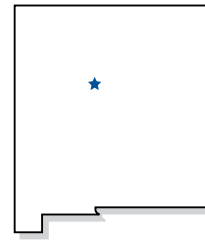
**Comments:** The inadequacy of New Mexico's Content Knowledge Assessment for elementary teachers (which serves as New Mexico's licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

Ratings: ● Meets standard ● Nearly meets standard ● Partly meets standard ● Meets a small part of standard  
○ Fails to meet standard ? Cannot be determined NA Not applicable





**The University of New Mexico**  
Albuquerque, New Mexico  
**College of Education**



### I. Admission standards ○

**Comments:** The university is not “more” or “most selective” in its admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

### II. Teacher preparation in reading ●

**Areas of strength:** Coverage of all components of the science of reading.

**Textbooks:** The reading courses for this program do not require any traditional textbooks.

However, we did review two course packets of various compiled materials that were required readings for the courses in our study.

### III. Teacher preparation in mathematics ●

**Areas of strength:** Textbook; little time spent on non-essential topics.

**Textbooks:** *Mathematics for Elementary Teachers* (2nd ed) by Sybilla Beckmann

**Comments:** This program received a passing rating in *No Common Denominator*, our national study of the preparation of elementary teachers, which was issued in 2008. The program is even stronger now.

Nonetheless, our rating has two caveats:

- The rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8.
- Elementary mathematics methods receive inadequate attention in a course that covers methods at both the elementary and middle school level.

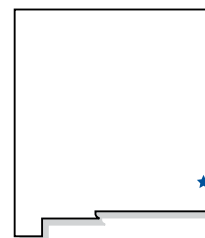
### IV. Exit standards ○

**Comments:** The inadequacy of New Mexico’s Content Knowledge Assessment for elementary teachers (which serves as New Mexico’s licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

Ratings: ● Meets standard   ● Nearly meets standard   ● Partly meets standard   ● Meets a small part of standard  
○ Fails to meet standard   ? Cannot be determined   NA Not applicable



**University of the Southwest**  
Hobbs, New Mexico  
School of Education



### I. Admission standards

**Comments:** The university is not "more" or "most selective" in its admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

### II. Teacher preparation in reading

**Areas of weakness:** No preparation is provided in the science of reading.

**Remedy:** Coursework should address instruction in phonemic awareness, phonics, fluency, vocabulary and comprehension strategies.

**Textbooks:** *Basic Reading Inventory: Pre-Primer Through Grade Twelve and Early Literacy Assessments* (9th ed) by Jerry L. Johns; *Improving Reading: Strategies and Resources* (4th ed) by Jerry L. Johns and Susan Davis Lenski; *Principles and Practices of Teaching Reading* (10th ed) by Arthur W. Heilman, et al. *Teaching Elementary Language Arts: A Balanced Approach* (6th ed) by Dorothy Rubin

### III. Teacher preparation in mathematics

**Areas of weakness:** No elementary content mathematics coursework is required.

**Remedy:** Adequate coursework with appropriate focus and strong textbook support.

**Comments:** Elementary mathematics methods receive inadequate attention in a course that covers methods for multiple subjects at both the elementary and middle school level.

### IV. Exit standards

**Comments:** The inadequacy of New Mexico's Content Knowledge Assessment for elementary teachers (which serves as New Mexico's licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

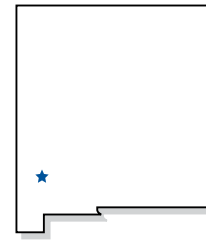
**Accreditation:** NCATE                      TEAC                      None ✓

**Number of elementary teachers produced: 23** (6th highest in state)

Data are from 2007-08, the most recent available from the National Center for Education Statistics.

**Opportunities for institution to respond:** Correspondence: April 8, 2009; July 7, 2009; August 13, 2009

Ratings: ● Meets standard   ● Nearly meets standard   ● Partly meets standard   ● Meets a small part of standard  
○ Fails to meet standard   ? Cannot be determined   NA Not applicable



**I. Admission standards** ○

**Comments:** The college is not selective in its undergraduate admissions. Education school applicants are screened for academic proficiency using the New Mexico Assessment of Teacher Basic Skills; however, the passing score set by the state may reflect virtually no mastery of even elementary and middle school content.

**II. Teacher preparation in reading** ◐

**Areas of strength:** Coursework includes preparation to teach comprehension strategies.

**Area(s) of weakness:** No evidence that coursework includes preparation to teach phonemic awareness, phonics, fluency and vocabulary strategies.

**Remedy:** Provide training in all five components of effective reading instruction.

**Textbooks:** *Diagnostic Teaching of Reading: Techniques for Instruction and Assessment* (6th ed) by Barbara J. Walker; *Principles and Practices of Teaching Reading* (10th ed) by Arthur W. Heilman, et al. *The Teacher's Guide to the Four Blocks: A Multimethod, Multilevel Framework for Grades 1-3* by Patricia M. Cunningham, et al.

**Comments:** This program was previously reviewed in NCTQ's 2006 national reading study. Although missing data prevented calculation of an overall score, the program then, as now, did not adequately address the science of reading.

**III. Teacher preparation in mathematics** ◑

**Areas of weakness:** Coursework lacks depth and does not cover essential topics. Instruction in geometry is particularly weak.

**Remedy:** Additional coursework with better focus and textbooks.

**Textbooks:** *Mathematics for Elementary Teachers: A Conceptual Approach* (7th ed) by Albert B. Bennett, Jr. and L. Ted Nelson

**Comments:** Our rating is for preparation to teach elementary mathematics only. This program does not offer preparation adequate for mathematics instruction in grades 7 and 8.

Elementary mathematics methods receive inadequate attention in two courses that covers methods for multiple subjects at both the elementary and middle school level.

**IV. Exit standards** ○

**Comments:** The inadequacy of New Mexico's Content Knowledge Assessment for elementary teachers (which serves as New Mexico's licensing test) means that the teacher preparation program does not verify that teacher candidates know content at a depth adequate for instruction.

Ratings: ● Meets standard ◐ Nearly meets standard ◑ Partly meets standard ◒ Meets a small part of standard  
○ Fails to meet standard ? Cannot be determined NA Not applicable



## APPENDIX A: RATINGS FOR REQUIRED TEXTS — READING

Author	Title	Number of courses in which text is read	Rating
Blevins, Wiley	<i>Teaching Phonics and Word Study In The Intermediate Grades: A Complete SourceBook</i>	1	Acceptable supplemental
Brisk, Maria Estela; Harrington, Margaret M.	<i>Literacy and Bilingualism: A Handbook for ALL Teachers (2nd ed)</i>	1	Not acceptable supplemental
Coles, Gerald	<i>Reading the Naked Truth: Literacy, Legislation, and Lies</i>	1	Not acceptable supplemental
Cunningham, Patricia M.; Hall, Dorothy P.; Sigmon, Cheryl M.	<i>The Teacher's Guide to the Four Blocks: A Multimethod, Multilevel Framework for Grades 1-5</i>	1	Not acceptable core
Flint, Amy Seely	<i>Literate Lives: Teaching Reading and Writing in Elementary Classrooms</i>	1	Not acceptable core
Fountas, Irene C.; Pinnell, Gay Su	<i>Guiding Readers and Writers, Grades 5 - 6: Teaching Comprehension, Genre, and Content Literacy</i>	2	Not acceptable core
Fox, Barbara J.	<i>Word Identification Strategies: Building Phonics into a Classroom Reading Program (4th ed)</i>	1	Acceptable supplemental
Galda, Lee; Cullinan, Bernice E.	<i>Literature and the Child (6th ed)</i>	1	Not relevant
Heilman, Arthur W.; Blair, Timothy R.; Rupley, William H.	<i>Principles and Practices of Teaching Reading (10th ed)</i>	2	Not acceptable core
Hurley, Sandra Rollins; Tinajero, Josefina Villamil	<i>Literacy Assessment of Second-Language Learners</i>	1	Not acceptable supplemental
Johns, Jerry L.	<i>Basic Reading Inventory: Pre-Primer Through Grade Twelve and Early Literacy Assessments (9th ed)</i>	1	Not acceptable supplemental
Johns, Jerry L.; Lenski, Susan Davis	<i>Improving Reading: Strategies and Resources (4th ed)</i>	1	Acceptable supplemental
Perrin, Robert	<i>Pocket Guide to APA Style (2nd ed)</i>	2	Not relevant
Pike, Kathy; Mumper, Jean	<i>Making Nonfiction and Other Informational Texts Come Alive: A Practical Approach to Reading, Writing, and Using Nonfiction and Other Informational Texts Across the Curriculum</i>	1	Not relevant
Rubin, Dorothy	<i>Teaching Elementary Language Arts: A Balanced Approach (6th ed)</i>	1	Not acceptable core
Tompkins, Gail E.	<i>Literacy for the 21st Century: A Balanced Approach (4th ed)</i>	3	Not acceptable core
Tunnell, Michael O.; Jacobs, James S.; Darigan, Daniel (Eds.)	<i>Children's Literature Database: A Resource for Teachers, Parents, and Media Specialists (3rd ed)</i>	1	Not relevant
Vacca, Jo Anne L.; Vacca, Richard T.; Gove, Mary K.; Burkey, Linda C.; Lenhart, Lisa A.; McKeon, Christine A.	<i>Reading and Learning to Read (6th ed)</i>	1	Not acceptable core

Author	Title	Number of courses in which text is read	Rating
various	<i>EDUC 550: Teaching of Reading Packet</i>	1	Acceptable core
various	<i>EDUC 551L: Teaching Reading in Elementary School Packet</i>	1	Not acceptable core
Walker, Barbara J.	<i>Diagnostic Teaching of Reading: Techniques for Instruction and Assessment (6th ed)</i>	1	Not acceptable supplemental
Zarrillo, James	<i>Teaching Elementary Social Studies: Principles and Applications (5th ed)</i>	1	Not relevant
Zentella, Ana Celia	<i>Building on Strengths: Language and Literacy in Latino Families And Communities</i>	1	Not relevant

#### OTHER ACCEPTABLE CORE TEXTS USED IN OTHER STATES

Author(s)	Title
Birsh, Judith R.	<i>Multisensory Teaching of Basic Language Skills (2nd ed)*</i>
Carnine, Douglas W.; Silbert, Jerry; Kame'enui, Edward J.; Tarver, Sara G.; Jungjohann, Kathleen	<i>Teaching Struggling and At-Risk Readers: A Direct Instruction Approach*</i>
Cooper, J. David; Kiger, Nancy D.	<i>Literacy Assessment: Helping Teachers Plan Instruction (5th ed)</i>
Gillet, Jean Wallace; Temple, Charles; Crawford, Alan	<i>Understanding Reading Problems: Assessment and Instruction (7th ed)</i>
Graves, Michael F.; Juel, Connie; Graves, Bonnie B.	<i>Teaching Reading in the 21st Century (4th ed)</i>
Gunning, Thomas G.	<i>Assessing and Correcting Reading and Writing Difficulties (5th ed)</i>
Gunning, Thomas G.	<i>Creating Literacy Instruction for All Students (6th ed, 7th ed)</i>
Shanker, James L.; Ekwall, Eldon E.	<i>Locating and Correcting Reading Difficulties (9th ed)</i>

Books marked with an asterisk (\*) are core textbooks that have been used in reviewed special education courses only.



## APPENDIX B: RATINGS FOR REQUIRED TEXTS — ELEMENTARY CONTENT MATHEMATICS

### TEXTBOOK SCORES

THE FOLLOWING TABLE SUMMARIZES THE SCORES OF ALL TEXTBOOKS USED IN NEW MEXICO'S UNDERGRADUATE TEACHER PREPARATION PROGRAMS. THE TWO LAST LINES (HIGHLIGHTED) OF THE TABLE SHOW THE RATINGS OF TWO RECOMMENDED TEXTBOOKS THAT ARE NOT USED IN THE STATE.

AUTHOR AND TEXTBOOK	NUMBERS & OPERATIONS (54 POINTS POSSIBLE)	ALGEBRA (39 POINTS POSSIBLE)	GEOMETRY (54 POINTS POSSIBLE)	DATA ANALYSIS & PROBABILITY (19 POINTS POSSIBLE)	TOTAL SCORE (166 POINTS POSSIBLE)
Beckmann <i>MATHEMATICS FOR ELEMENTARY TEACHERS</i>	54 <sup>1</sup>	29	48	19	150
Bennett, Nelson <i>MATHEMATICS FOR ELEMENTARY TEACHERS: A CONCEPTUAL APPROACH</i>	33	15 (deficient)	41	19	108
Musser, Burger, Peterson <i>MATHEMATICS FOR ELEMENTARY TEACHERS: A CONTEMPORARY APPROACH</i>	45	16 (deficient)	45	19	125
Billstein, Libeskind, Lott <i>A PROBLEM SOLVING APPROACH TO MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS</i>	35	38 <sup>1</sup>	50	19	142
Parker, Baldrige <i>ELEMENTARY MATHEMATICS FOR TEACHERS AND ELEMENTARY GEOMETRY FOR TEACHERS</i>	54 <sup>1</sup>	24	54	19	151

<sup>1</sup> Appendix D of our national report on mathematics preparation comments extensively on the indicated section of this textbook.

## APPENDIX C: COMMENTS FROM NEW MEXICO TEACHER PREPARATION PROGRAMS

WE SOLICITED COMMENTS FROM ALL EIGHT PREPARATION PROGRAMS EVALUATED IN THIS STUDY. TWO PROGRAMS RESPONDED AND THEIR COMMENTS ARE FOUND BELOW:

### NEW MEXICO STATE UNIVERSITY

The teacher education programs in the College of Education at New Mexico State University are nationally accredited by the National Council of Accreditation for Teacher Education (NCATE). In fact, the teacher education programs have been accredited by NCATE since 1961. The graduates of our teacher education programs are highly sought out by school districts within New Mexico as well as by school districts across the nation. Our unique cultural context enables our students and graduates to be highly qualified to work with the increasingly diverse student population that reflects our state as well as the nation's diverse student body.

The students admitted to the Teacher Education Program at the end of their sophomore year have a 3.15 GPA, while program graduates average between 3.20 and 3.35 GPA. Elementary Education majors take 6 hours of math content (soon to be 9 hours) and 12 hours of science content courses. Additionally 25 to 30 percent of our elementary majors select math and or science as their teaching field which requires 24 hours of course work in each of those areas.

The pass rate on the New Mexico Teacher Assessments (three assessments covering basic skills, content knowledge, and teacher competency) for teacher licensure for our education graduates is 93 – 95 percent. Ten years of principal surveys indicate 93 to 100 percent satisfaction with the teaching field knowledge of education graduates. Our follow up surveys with graduates who are now teaching also indicate a 95 percent satisfaction with their preparation in teaching field knowledge.

A more recent survey with principals that focused on math and literacy satisfaction from recent employers was reviewed. Principals who recently employed NMSU graduates indicated that 87 percent of principals surveyed believed that NMSU graduates were prepared to teach reading and 86 percent felt that NMSU graduates were prepared to teach mathematics.

### THE UNIVERSITY OF NEW MEXICO

A foundational emphasis of the Elementary Education Program at the University of New Mexico is strong disciplinary and pedagogical knowledge in the content fields of mathematics and reading. Within the preparation courses, students take nine hours of mathematics in the Department of Mathematics and a three-hour mathematics methods course in the Elementary Education Program, all focused on teaching culturally and linguistically diverse student populations in grades K-8. Students also take four reading methods courses during the professional education component of their program with a similar focus on the needs of diverse student populations. All methods courses are taught in connection with field experiences in order to allow for application of what students are learning in school classrooms. The courses are configured to build pre-service teachers' knowledge and skills over time in a coherent design of content and pedagogy. On the whole, in the areas of mathematics and reading our program exceeds the state requirements for licensure.

This report is available online from [www.nctq.org](http://www.nctq.org)



**NATIONAL COUNCIL ON TEACHER QUALITY**

1420 New York Avenue, Suite 800

Washington, D.C. 20005

Tel: 202 393-0020 Fax: 202 478-0838 Web: [www.nctq.org](http://www.nctq.org)

*The National Council on Teacher Quality advocates for reforms in a broad range of teacher policies at the federal, state and local levels in order to increase the number of effective teachers.*

*Subscribe to NCTQ's free monthly electronic newsletter, Teacher Quality Bulletin, ([www.nctq.org/pltqb/subscribe.jsp](http://www.nctq.org/pltqb/subscribe.jsp)), to stay abreast of trends in federal, state, and local teacher policies and the events that help to shape them.*

