

**New Hampshire
Department of Education
Division of Program Support**

***Report on New Hampshire Educators:
Credentialing and Employment Trends***

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Table of Contents

Content	Pages
Introduction.....	1
New Hampshire Teacher Demographics.....	2
Stability of the Workforce.....	2
Gender and Age.....	2
Education Level of Teachers.....	4
Teaching Salaries.....	6
Teacher Retirement.....	7
Distribution of Educators in the State.....	8
Pathways to Certification in New Hampshire.....	12
New Certifications and Supply of Teacher Candidates in the State.....	15
Graduates of New Hampshire Professional Educator Preparation Programs.....	17
Candidate Endorsement Areas across New Hampshire Professional Educator Preparation Programs	19
Elementary Education.....	19
Mathematics and Science Education.....	20
English Education, Social Studies, Language and the Arts.....	21
Business Education, Technology Education, Career and Technical Education, and Family Consumer Education.....	21
Other Endorsement Areas.....	22
Efforts to Recruit and Train Teachers in Critical Shortage Areas in the State.....	23
Employment and Retention Patterns.....	27
Conclusions	28
Recommendations.....	29
References.....	31
Appendices.....	32

New Hampshire Educators: Credentialing and Employment Trends

Introduction

This report was prepared for the New Hampshire Department of Education, Division of Program Support, in response to a request for information on educator credentialing and employment trends in the state. It is a follow-up to a previous study of these trends conducted in 2002 (Mackin, 2003). This present report expands and updates the scope of the earlier study to examine trends for the following four program-year periods: 2001-2002; 2002-2003; 2003-2004; 2004-2005.

The current report describes characteristics of New Hampshire educators, including recent employment, retention, and retirement data. It identifies recent trends in completion and certification rates for students graduating from each of the fourteen Institute of Higher Education (IHE) **professional educator preparation** programs in the state. Also addressed are certification rates and endorsement areas for new teacher candidates from the five pathways to certification to determine the demand for teachers in critical shortage teaching areas. The specific questions addressed in the study are:

1. What are the characteristics of current New Hampshire educators, including age, gender, endorsement area, and salary?
2. Are there differences in teacher full time equivalents (FTE) by school district over time?
3. How many candidates seek certification through each of the five New Hampshire pathways to certification? What endorsement areas do they seek? Of those who apply, how many are certified?
4. How stable is the teacher workforce in New Hampshire as indicated by retention and retirement rates?

5. What are the areas of critical shortage in the state where teacher demand exceeds teacher supply and, conversely, where supply exceeds demand?
6. How are professional educator preparation programs and other statewide initiatives addressing these critical shortages in the state?

To answer these questions, the researchers relied primarily on New Hampshire Department of Education (NHDOE) data from the credentialing database and the department's education statistics program. In addition, they used state and district-level documentation, Title II information submitted annually to the U.S. Department of Education, and other relevant published sources.

New Hampshire Teacher Demographics

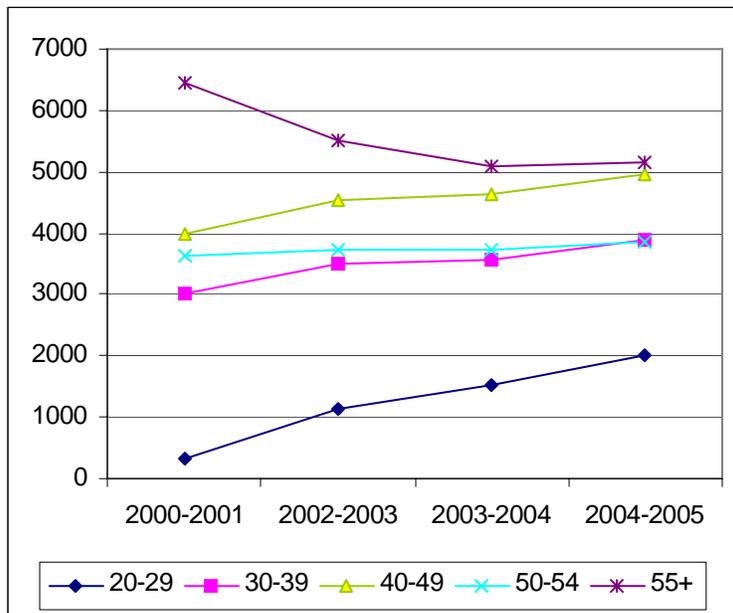
This section addresses the characteristics of current New Hampshire educators employed in the state. Descriptive data on educators' gender, age, and educational level are presented as well as comparison data on statewide and regional teacher salary levels and teacher retirement trends.

Stability of the Workforce. According to New Hampshire Department of Education (NHDOE) records, the number of teachers employed in NH public schools has been relatively stable over the past four years, from 14,205 in 2001 to 14,656 in 2005. Records also indicate that there were 6,000 (FTE) paraprofessionals employed in the New Hampshire schools during this same time period, serving primarily in Title I or Special Education classrooms.

Gender and Age. The overwhelming majority (75%) of current New Hampshire educators are female, a statistic that has remained stable over the past four years. As shown in the graph below (Exhibit 1), the trends for age follow a predictable pattern, given the increasing number of teachers in their late 50's and early 60's. In 2000-2001,

there were 4,033 active teachers between 55-69 while in the most recent data, there are 3,674 in this age group. Perhaps more dramatically, roughly half of the New Hampshire teacher workforce (49%) were reported as 55 years or older in 2000-2001 and most recently, only a quarter of teachers are members of this age group. Paralleling this trend is the increasing number of younger teachers in 2004-2005, as compared with 2000-2001. As the graph (Exhibit 1) illustrates, the proportion of the age groups in the middle range (30-39, 40-49, and 50-54) stayed relatively stable.

Exhibit 1: Age groups of NH Teachers over Time



Education Level of Teachers. Teacher education levels remained consistent across the four years of this study. As illustrated on Exhibit 2, from 2001 to 2005 there was little change in the education level of teachers. Slightly over 40% held Masters Degrees. Very few educators (less than 2 %) held a degree beyond the Masters.

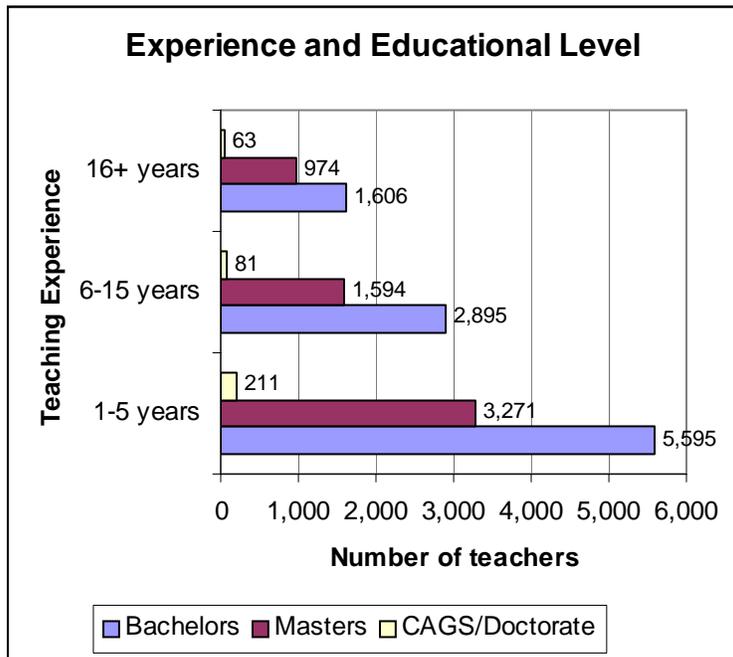
Exhibit 2: Education Level of Teachers for Years 2001-2005.

Program Year	Total Number of Teachers	Teacher Education Level		
		Bachelors	Masters	Beyond Masters
2001-2002	14,677	55%	42%	1.4%
2002-2003	14,978	55%	44%	1.3%
2003-2004	14,985	54%	44%	1.5%
2004-2005	15,163	53%	45%	1.2%

Source: <http://www.ed.state.nh.us/education/data/index.htm>

A substantial number (3,271) of beginning teachers hold a Masters degree. (See Exhibit 3.) This may be due to individuals entering the profession with a Masters degree or achieving it in their first five years of employment. One of the largest professional educator preparation programs in the state (University of New Hampshire) is a five-year program that awards a Masters degree with initial certification. Fewer mid-career teachers (6-15 years) and teachers with more than sixteen years of experience hold a Masters degree, even though many school districts in the state partially support graduate level education as teacher professional development and offer salaries based on education level as well as experience.

Exhibit 3: Experience and Education Level of Employed Educators (2003-2005)



Teacher Salaries. During the four-year period of this study, there was a 9% increase in the *overall* average teacher salary in the state, from \$40,002 in 2001 to \$43,941 in 2004-05. (See Exhibit 4.) Average salaries for *beginning* teachers grew at a similar rate during the same time period, from \$25,611 in 2001-2002 to \$28,279 in 2004-2005. An examination of 2004-2005 data shows that *overall* average salaries range considerably across localities, from a high of \$59,236 in Hanover, NH, to a low of \$28,298 in Unity, NH. The average *beginning* teacher salary also varied widely by district in 2004-2005, from \$34,470 (Hanover) to \$22,583 (Unity). (See Exhibit 4 for variance in overall averages and beginning teacher salaries by each year of the study.)

Exhibit 4: Overall Average and Beginning Teacher Average Salaries in New Hampshire (2001-2005)

Study Years	Overall Average Salary and Range	Average Beginning Salary and Range
2001-2002	\$40,002 \$53,115 - \$26,000 (Hanover - Warren & Piedmont)	\$25,611 \$31,339 - \$20,054 (Hanover - Jackson)
2002-2003	\$41,909 \$59,532 - \$26,113 (Hanover - Croydon)	\$26,459 \$32,898 - \$21,755 (Newington - Pittsburg)
2003-2004	\$42,690 \$59,158 - \$27,703 (Hanover - Unity)	\$27,340 \$33,466 - \$21,947 (Hanover - Unity)
2004-2005	\$43,941 \$59,236 - \$28,298 (Hanover - Unity)	\$28,279 \$34,470 - \$22,583 (Hanover - Unity)

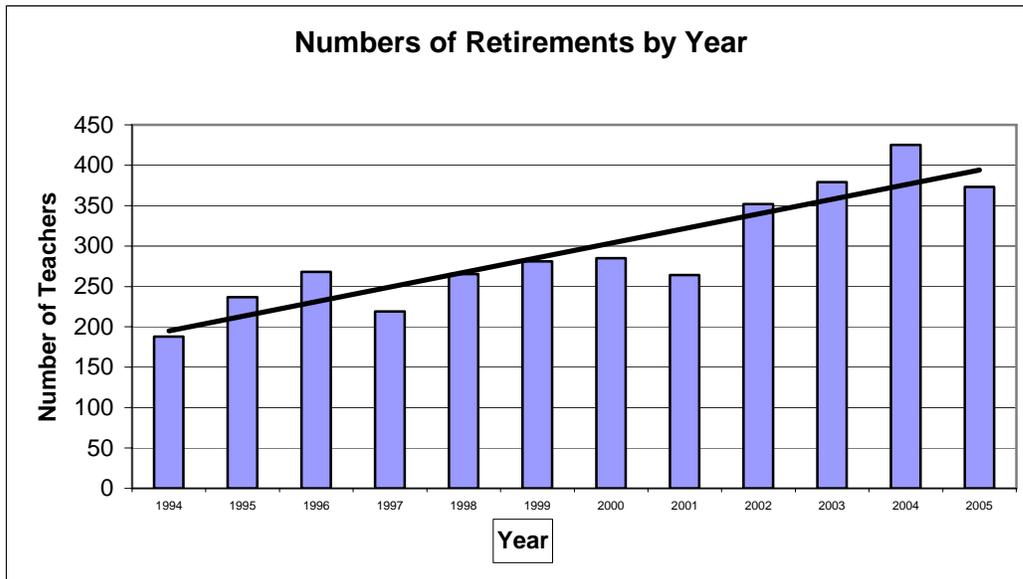
New Hampshire ranks fifth among the six New England states in terms of average teacher salary, even though New Hampshire is considered the fastest growing state in the

New England region, both in population and economic outlook.¹ In 2004-2005, the following average teacher salaries were reported across the New England states:

Connecticut (\$57,760); Massachusetts (\$53,733); Rhode Island (\$52,261); Vermont (\$44,346); New Hampshire (\$43,941); and Maine (\$37,720).

Teacher Retirement. As Exhibit 5 shows, an increasing number of New Hampshire teachers have been retiring from the profession over the past decade. More than 350 teachers have retired each year since 2002.

Exhibit 5: New Hampshire Teacher Retirement Trends



While there is little national data on teacher retirement rates, information from the National Center for Education Statistics (NCES) indicates that the percentage of teachers over 55 years of age has increased proportionately since 1993, an indication that retirements will also be up in subsequent years (www.ncrel.org/policy/pubs). This is consistent with the New Hampshire teacher age data presented earlier in Exhibit 1

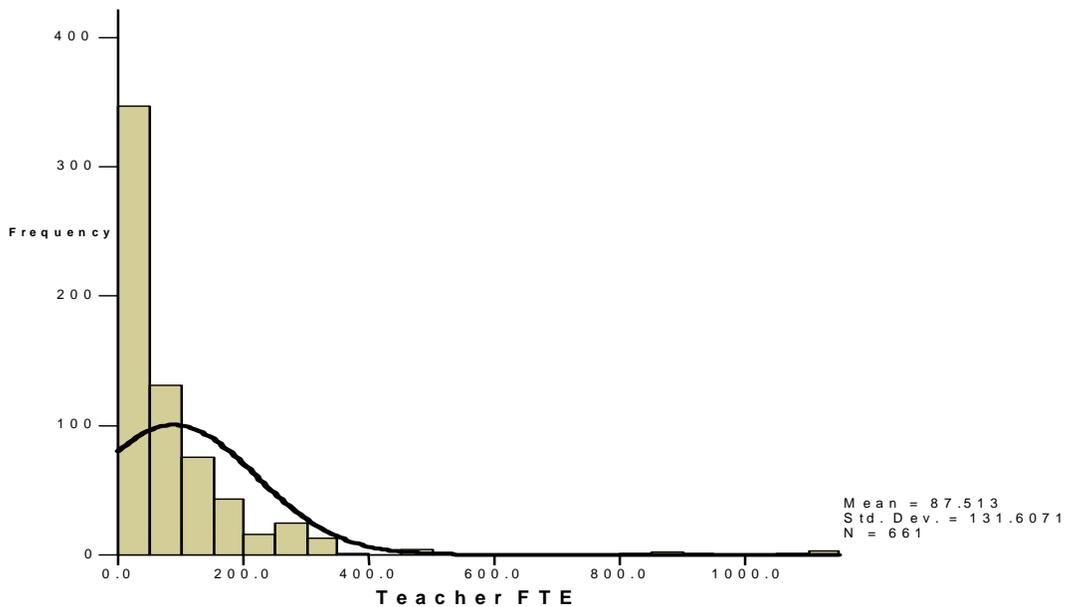
¹ From 2000-2004 New Hampshire experienced a 5.2% growth in population as compared to a 4.3% growth in the US population overall. This figure is compared to the previous census data for 1990 when NH experienced an 11.4 % growth in population compared to 13.1% for the US as a whole.

illustrating that younger teachers are beginning to replace older teachers who are part of the baby boom population in the U.S.

Distribution of Educators in the State

The distribution of educators in New Hampshire parallels the state’s population distribution. According to the U.S. Census, Manchester and Nashua are the two largest cities and have the largest numbers of K-12 students as well. The most recent data available (2004-2005) reveals that educator full time equivalents varies widely among the 169 school districts in the state, from 1 FTE in Landaff to 1,143 FTE in Manchester. Manchester, Nashua, and Concord all exceeded 450 teacher FTEs for the past four years. As graphically illustrated in Exhibit 6, the teacher FTE distribution has a large positive skew across school districts.²

Exhibit 6: FTE Distribution of NH School Districts



² In the figure, the curve superimposed on the histogram describes a normal distribution. The difference shows how variable the FTEs are across school districts.

Because of the extreme shape of the distribution, we divided the districts into quartiles (each with 43-44 districts). (See Exhibits 7 through 10.) Group 1 consisted of small districts, averaging 7.9 FTE. The largest of these districts was Wilton with an FTE=17 teachers in 2004-05. Group 2 districts had between 17 and 44 FTEs, with a mean of 31 FTE. Districts in this group for 2004-05 included Stratford (18 FTE), Gorham (44 FTE) and Barnstead (31 FTE).

Exhibit 7: Group 1 FTE Distribution - Small

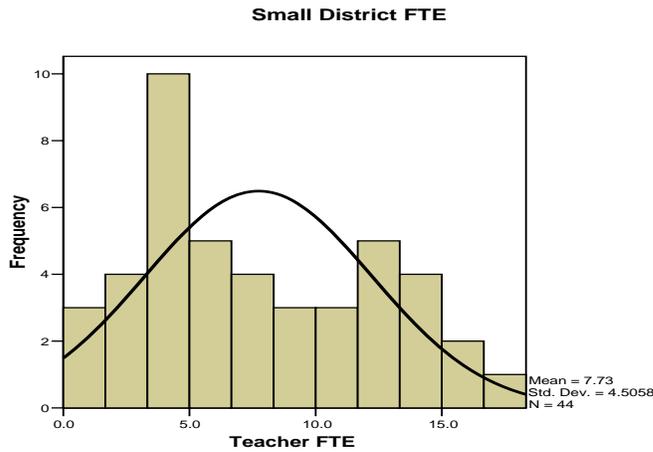
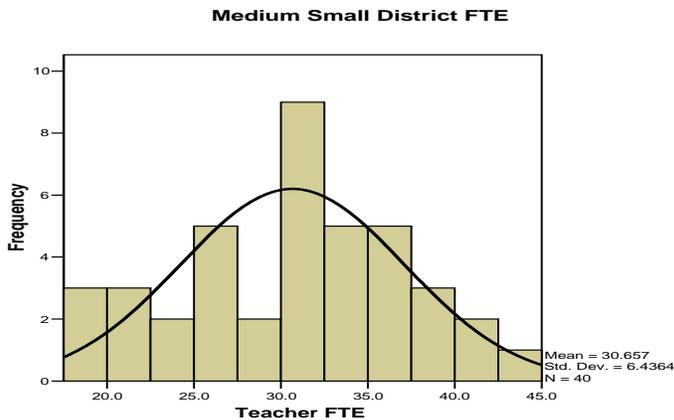


Exhibit 8: Group 2 FTE Distribution-Medium Small



Group 3 districts averaged 74 FTE with a range from 45 (Seabrook) to 107 (Pembroke). Finally, the largest districts averaged 238 FTE with the minimum value of 107 FTE and the maximum being 1,143 FTE. Within these groups, the distributions were more normal except for Group 4 (the largest), which still had a positive skew.³

Exhibit 9: Group 3 FTE Distribution-Medium Large

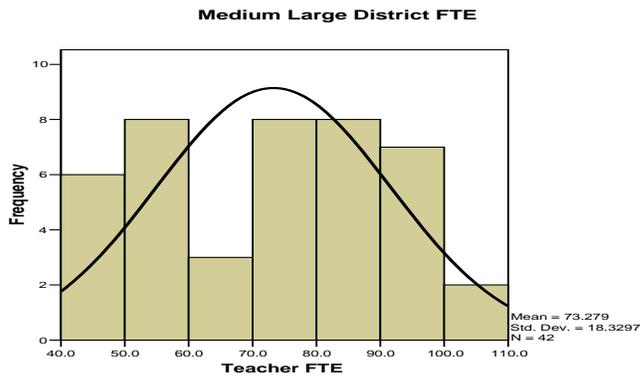
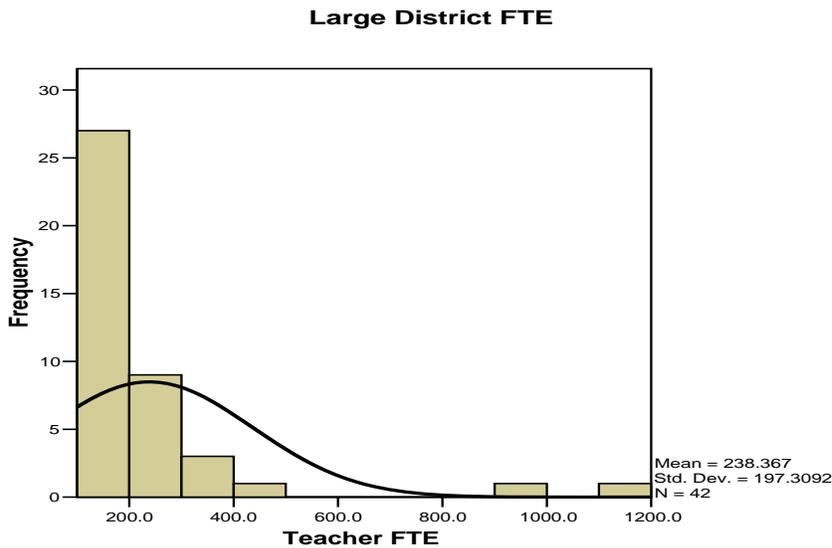


Exhibit 10: Group 4 FTE Distribution – Large Districts

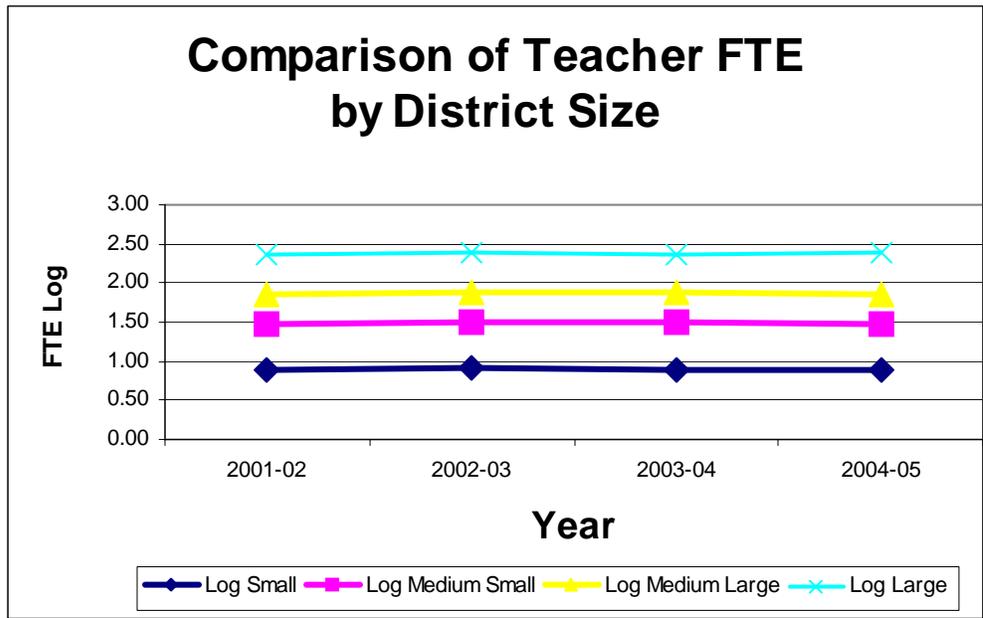


³ A skew indicates that a distribution includes either very small or very large values. If a distribution is skewed, descriptive statistics are all distorted.

These four school district groups vary in size, but whether employment trends are equivalent across these four groups is another question. Specifically, has the FTE of large districts (Group 4) varied systematically over time as compared to the other three groups? To answer this question, the four groups were compared across the four years of the study using inferential statistics to calculate statistical significance.⁴ There was no significant difference between years once the differences in groups' sizes were factored.

The dramatic differences in the scale for the four district groups made the equivalence of the trend for the four years difficult to compare visually. In Exhibit 11, the FTE raw numbers are transformed into logarithms of the FTE in order to illustrate the trends more clearly. As is apparent in the graphic, the trend lines are parallel, suggesting that the districts across the state had equivalent FTE across the four years of employment.

Exhibit 11: Trends over Time in Teacher FTE by District Size



⁴ The specific procedure was a 4*4 analysis of variance (ANOVA) which yielded an F statistic of 0.018 and an associated probability of 0.997.

Pathways to Certification in New Hampshire

There are currently five pathways to teacher certification in New Hampshire.

These five pathways are described in Exhibit 12 below.

Exhibit 12: New Hampshire’s Alternative Pathways to Certification

Pathways to Certification	Description of Alternative Pathway
<p>Alternative I: Preparation through NH Professional Educator Preparation Programs</p>	<p>Completion of a professional educator preparation program at one of the public or private institutions of higher education in New Hampshire, including a practical/experience-based student teacher practicum.</p>
<p>Alternative II: Reciprocity</p>	<p>New Hampshire accepts candidates from all states and the jurisdictions if the candidates graduated from an approved state program have been employed as a certified teacher for at least three years out of the last seven, or completed an alternative certification program.</p>
<p>Alternative III A, B, C: Non-Traditional Path-Demonstrated Competencies</p>	<p>There are three options to Alternative III:</p> <p>Alternative III-A- Educators: Requires a demonstration of teacher competencies through submission of a portfolio and interview with a board of examiners. Must have at least 3 months of full-time continuous experience as an educator in the area of endorsement.</p> <p>Alternative III-B- Educators: A national level or regional certification such as National Board for Professional Teaching Standards (NBPTS) or American Board for Certification of Teacher Excellence (ABCTE) which has been validated in the individual's endorsement area and achieved by passing a national or regional examination designed to assess the individual's skill in the area in which the individual seeks certification.</p> <p>Alternative III-C- Administrators: Superintendent of schools, principals, or special education administrators can qualify for certification if the Bureau determines, using transcript analysis, that he or she meets specific requirements for that area of administration.</p>
<p>Alternative IV: Critical Shortage Areas, Career and Technical Education, and Business Administrator</p>	<p>Completion of a professional development plan in a <i>critical shortage teaching area, career and technical education, and/or business administration</i>; successful teaching under a mentor teacher; and recommendation for certification from the local Superintendent of Schools.</p>
<p>Alternative V: Site-Based Plan Certification</p>	<p>Graduation from a four-year institute of higher education with a <i>Bachelor's degree plus 30 credit hours</i> in the discipline associated with the endorsement; one year successful teaching under a mentor teacher; completion of a professional development plan; and recommendation from the local Superintendent of Schools.</p>

In reporting data on certifications through the five pathways, it is important to note that “Alternative 0” is referenced in the data. NHDOE did not track or keep data on teachers by alternative certification prior to 1985. However, NHDOE staff believes that the majority of these “unknowns” who are listed as “Alternative 0” were actually certified through Alternatives I or II. The Alternative routes III and IV were not available prior to 1975 and Alternative V was not available until 1991.

Alternative I is the certification route for teachers who completed their teacher training at one of New Hampshire’s fourteen professional educator preparation programs. Through Alternative II, New Hampshire accepts candidates from other states and jurisdictions if the candidates have graduated from an approved out-of-state program, have been employed as a certified teacher for at least three years out of the last seven, or have completed an alternative certification program in another state. New Hampshire also recognizes completion of comparable programs in other countries through this alternative.

There are three options under Alternative III certification. The first option, Alternative III-A, requires a demonstration of teacher competencies through submission of a portfolio and interview with a board of examiners. Alternative III-A also requires candidates to have at least three months of full-time continuous experience as an educator in their area of endorsement. The second option, Alternative III-B (National or Regional Certification), applies to all educators and requires candidates to hold a national or regional certification, such as National Board for Professional Teaching Standards (NBPTS) or American Board for Certification of Teacher Excellence (ABCTE), which has been validated in the individual’s endorsement area and achieved by passing a

national or regional examination designed to assess the individual's skill in the area in which the individual seeks certification. Option three, Alternative III-C, only applies to administrator certification. Under this option, superintendents of schools, principals, special education administrators, or career and technical directors can qualify for certification if NHDOE determines, using transcript analysis, that the individual meets specific requirements for that area of administration.

Alternatives IV and V both require completion of a professional development plan, successful teaching under a mentor, and a recommendation from the local superintendent of schools. Alternative IV applies to individuals seeking certification in a critical shortage area, Career and Technical Education, and Business Administration, while Alternative V is based on local district hiring and supervision of individuals to teach in any subject area.

New Certifications and Supply of Teacher Candidates in the State

According to NHDOE, there were 22,124 individuals who held certifications continuously during this 2001-2005 timeframe; this figure includes certifications for administrative positions, classroom teachers, and previously certified educators who sought additional endorsements in areas such as Learning Disabilities. Of the 22,124 certificate holders, 7,182 individuals were employed continuously in New Hampshire schools during the 2001-2005 timeframe.⁵ The majority (5,970) of these individuals were classroom teachers while 1,212 were principals and education specialists, such as guidance counselors and reading specialists.

The number of individuals with the Beginning Educator Credential (BEC) increased progressively during the 2001-2005 timeframe. (See Exhibit 13.) In 2001, 447 individuals received the BEC and 1,397 received it in 2005. This trend was consistent across the five certification pathways despite the differences in numbers. Exhibit 13 shows the increasing numbers for each alternative route to certification.

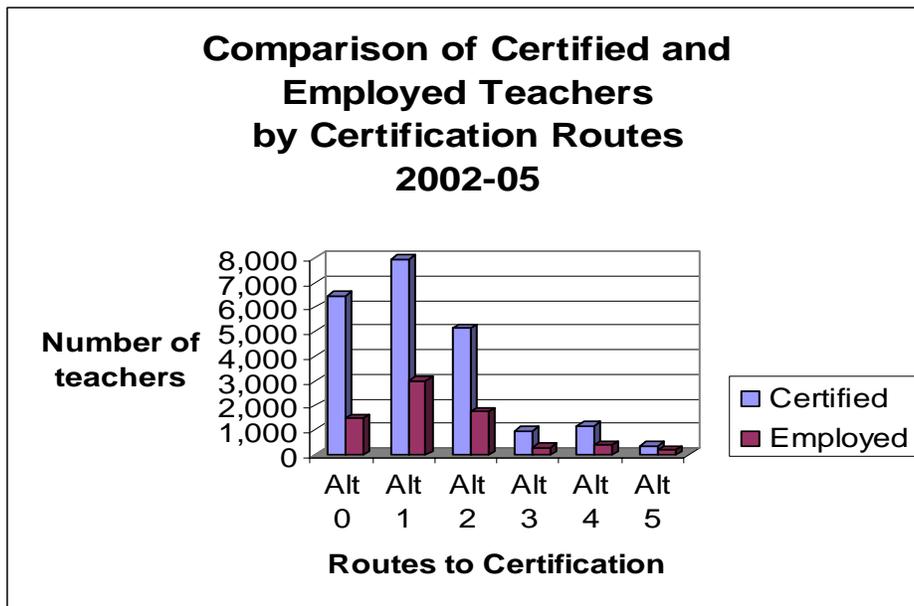
Exhibit 13: New Beginning Educator Credentials (BECs) by Alternative Pathway to Certification (2001-2005)

Alternative Pathway	Number of New BECs by Year from 2001-2005					
	2001	2002	2003	2004	2005	Totals
Alt 1	279	313	755	922	909	3,178
Alt 2	142	154	427	482	343	1,548
Alt 3	6	0	14	17	15	52
Alt 4	6	13	38	55	72	184
Alt 5	14	15	57	52	58	196
Totals	447	495	1,311	1,528	1,397	5,158

⁵ No NHDOE data were available to indicate the number who received certifications but taught in another state or never taught. Also this database does not track multiple endorsements held by each teacher and the year they were awarded.

Exhibit 14 illustrates the percentage of individuals who were certified and employed through each of the five pathways to certification during the 2002-2005 program years. As can be seen from the following graph, the proportion of certified individuals who are employed is relatively constant across the certification pathways, although the numbers vary considerably. Within each pathway, a minority of individuals are employed as educators in New Hampshire.

Exhibit 14: Certified and employed teachers by certification routes for 2002-2005



Note on Alternative “0”: NHDOE records did not track teachers by alternative certification prior to 1985. However, NHDOE staff believes that the majority of individuals who are listed as “Alternative 0” were actually certified through Alternatives I or II. The Alternative routes III and IV were not available prior to 1975 and Alternative V was not available until 1991.

Graduates of New Hampshire Professional Educator Preparation Programs

In this section we examine the proportion of participants who sought and received certification in New Hampshire from the fourteen in-state professional educator preparation programs and the candidate endorsement areas across these institutions. Exhibit 15 displays the number of program candidates who were recommended for certification in each of the educator preparation programs, those who applied for initial certificates, and those who were issued certificates in 2004-2005.

Exhibit 15: New Hampshire Professional Educator Preparation Program Certification Candidates (2004-2005)

NH Professional Educator Preparation Programs	Candidates Recommended for Certification	Candidates Who Applied for Certification	Certificates Issued
Antioch/New England	48	29	29
Chester College	2	0	0
Colby-Sawyer College	16	11	9
Dartmouth College	13	13	10
Franklin Pierce College	71	63	63
Granite State College (formerly CLL)	41	38	28
Keene State College	198	157	141
New England College	12	11	11
Plymouth State University	164	112	108
Rivier College	180	154	149
Southern New Hampshire University	62	54	50
St. Anselm College	8	5	3
University of New Hampshire	261	165	155
Upper Valley Teacher Institute	33	23	20

As indicated in Exhibit 15, two of the four schools in the University of New Hampshire System (University of New Hampshire and Keene State College) produced the largest number of candidates for initial certification, 261 and 198 respectively. These were followed by Rivier College (180) and Plymouth State University (164). The remainder of the New Hampshire professional educator preparation programs accounted for less than 22% of the applicants for certification in the state.

As can be seen in Exhibit 15, the number of candidates who apply for New Hampshire certification is relatively proportional across schools. For instance, in almost every case, sixty percent (60%) or more of the candidates apply for certification in the state. Given these statistics, it is certainly possible that out-of-state students do not apply for New Hampshire certification, but there is a lack of data to explain this proportion being so small.

Candidate Endorsement Areas across New Hampshire Professional Educator Preparation Programs

Elementary Education Endorsements. As illustrated in Appendix I, Table I, in 2004-2005, the largest number of certification applicants from professional educator preparation programs in New Hampshire was seeking an Elementary Education endorsement. Ninety-one percent (334) of the 368 candidates in Elementary Education were educated in four programs: Keene State College (97); University of New Hampshire (75); Plymouth State College (47); and Franklin Pierce College (54). (See Appendix I, Table I for statistics from all fourteen programs). A large number of applicants applied for the combined certification in Elementary and General Special Education. An additional, yet smaller number of candidates sought elementary certification with another endorsement area. The total number of Elementary Education teacher candidates (including elementary combined endorsement areas) is 509, almost one-half (47%) of *all* candidates of the teacher preparation programs. Rivier had the greatest number of candidates (44) in the combined endorsement area of Elementary and General Special Education.

The next highest number of candidates (97) sought General Special Education certification as their only endorsement. General Special Education is a critical shortage area in the state. While there were six New Hampshire professional educator preparation programs in New Hampshire with candidates in General Special Education, two-thirds (61) of the candidates received their teacher training from Granite State College. Granite State College trains teachers for a specific endorsement in General Special Education through a special Alternative IV process, the Special Education Teacher Training (SETT)

program. This program requires candidates for Alternative IV to complete a series of modules while teaching under a mentor teacher. Once the candidate has successfully completed the Granite State College SETT program, they are recommended for certification by the college and become a completer via Alternative I.

Several programs led to Early Childhood and/or related certification*; these programs were primarily at Plymouth State University (21); Rivier College (21) and Keene State College (12).

Mathematics and Science Education Endorsements. In Mathematics Education, which is a critical shortage area, 43 individuals sought certification. The largest proportion of candidates in Mathematics Education was from Rivier College (19), followed by University of New Hampshire (9) and Plymouth State University (6). Very few candidates sought certification in the sciences in 2004-2005. The most common Science Education endorsement area was Biology Education. The largest number of biology recommendations was made by the program at the University of New Hampshire (15). (See Appendix I, Table 2.) In the two critical shortage areas of Earth/Space Science and Physical Science, there were practically no candidates (two in Earth/Space Science and only 1 in Physical Science, all from the University of New Hampshire). In 2004-05, there was only one teacher certified in the critical shortage area of Physics (from Upper Valley Teacher Institute) and no candidates certified in Chemistry, another critical shortage area. General Science certification was second to Biology in numbers of candidates (a total of 9), with the largest numbers from the University of New Hampshire

*Some certificates related to early childhood were designated by other titles, such as PreK.

and Antioch New England College (4 from each institution). One candidate in General Science was from Upper Valley Teacher Institute.

English Education, Social Studies, Languages, and the Arts. English Education, Social Studies and other secondary certifications are common in a number of programs. (See Appendix I, Table 3.) Of the 14 professional educator preparation programs, all but four offer courses of study in English and Social Studies. Most of the traditional institutions that offer certification programs in these two disciplines also feature majors in these subjects. In total, there were 76 candidates in Social Studies and 59 in English Education. The largest number of candidates for these two certifications attended the University of New Hampshire or Keene State College. Several other institutions offered certifications that were rare or nonexistent at their peer institutions. One example of this was the 24 of 29 candidates for Music Education who attended the program at the University of New Hampshire. Notable among the critical shortage certification areas in this category were certifications in English for Speakers of Other Language (ESOL). (See Appendix I, Table 3). Only two individuals sought this certificate and both attended Southern New Hampshire University.

Business Education, Technology Education, Career and Technical Education, and Family Consumer Education Endorsement Areas. In 2004-2005, candidates from the 14 professional educator preparation programs sought endorsements only in the area of Computer Technology Education and Business Education. All of the candidates in Business Education (19) attended Southern New Hampshire University. Six candidates sought endorsements in the area of Computer Technology Education which is a critical shortage area in the state. These candidates were from Southern New

Hampshire University (5) and Keene State College (1). (See Appendix I, Table 4.) Two critical shortage areas in the state, Family Consumer Education and Career and Technical Education, have no candidates from the 14 professional educator preparation programs in the state in 2004-2005.

Other Endorsement Areas. Very few candidates applied for certification in the categorical areas of Special Education, specifically Mental Retardation (1), Emotionally Disturbed (8), and Learning Disabilities (13). (See Appendix 1, Table 5.) These certificates, which are all critical shortage teaching areas in the state, were obtained by candidates from Rivier College (16) and Granite State College (6) exclusively. (See Appendix 1, Table 5.) Forty candidates sought certification in the endorsement area of Physical Education from Plymouth State University (23), Keene State College (15), and New England College (2). Health Education yielded four candidates, all from Plymouth State University.

For a full listing of all professional educator preparation programs, candidate endorsement areas, and critical shortage areas in the state, see Appendix I, Tables 1-5. Critical shortage areas are marked with an asterisk.

Efforts to Recruit and Prepare Teachers in Critical Shortage Areas in the State

Since 2000, the NHDOE has launched several initiatives to increase the number of certified educators teaching in critical shortage areas in the state. In July 2002, the legislature passed a law to address the need for teachers in critical shortage areas. According to this law, the local school board, in consultation with the superintendent, may offer a one-time, one-year certificate of eligibility to any person. Under this law, the only qualifications are a Bachelor's degree from an accredited postsecondary institution and relevant experience and education. The legislation also includes a provision to allow local districts to declare a certification area as a local shortage if the teaching area was not designated as a state shortage. According to NHDOE staff, very few individuals utilize this pathway to certification.

In 2002, the NHDOE was awarded an \$800,000 USDOE Transition to Teaching grant. For the past three years, NHDOE staff has been working on this program called *Project Across* to recruit, train, and mentor teacher candidates from a target group of career changers and recent college graduates. The purpose of the program is to increase the number of potential candidates in critical shortage areas in an effort to fill needed teaching positions in the state.

In October 2003, NHDOE was awarded a three-year US Department of Education Teacher Quality Enhancement (TQE) grant to implement the New Hampshire Teacher Quality Enhancement System. While the primary goal of the project is to increase the number of highly qualified teacher candidates in critical shortage areas across the state, there are several other objectives that are intended to enhance the teacher workforce. For

instance, the project seeks to: (1) Improve the system of accountability for quality teacher preparation programs and accreditation processes to ensure high teaching standards; and (2) develop a consistent system of quality mentoring and ongoing professional development across the state to support new teachers' practice and increase teacher longevity in the profession.

Currently, NHDOE has several Induction-with-Mentoring pilot projects operating in New Hampshire school districts that are coordinated by the New Hampshire Local Education Support Centers and funded by a federal Teacher Quality Enhancement Grant (2003-2007). The primary purpose of these projects is to develop and implement a consistent system of quality induction-with-mentoring and ongoing professional development that will support new teachers' practice and improve teacher retention in the profession. These projects are focused on providing induction and mentoring services to teachers new to the profession (in their first 3 years of teaching) or new to the building, district, and grade level or content. The projects are based on New Hampshire's *Induction-with-Mentoring Toolkit: A School District's Guide to Initiating and Developing Induction-with-Mentoring Services for New Teachers*.

The NHDOE has also collaborated with several other programs, agencies, and groups in teacher recruitment efforts. Several of these programs, including financial incentives programs, are highlighted below:

- **TeachNorth.** A cooperative effort of 32 school districts, three colleges, and the NHDOE to encourage potential candidates to teach in the rural northern region of the state. (See www.teachnorth.org for more details.)

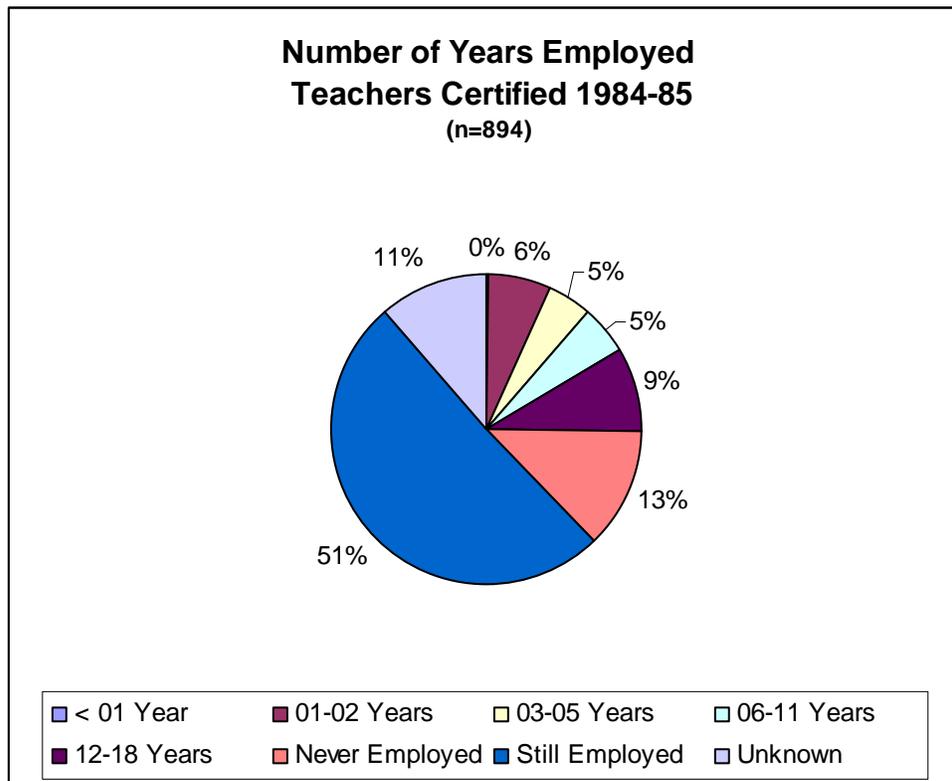
- **The Future Educators Academy.** A collaboration between NHDOE and the New Hampshire Forum on Higher Education, the Future Educators Academy seeks to develop a pipeline of high school students with potential as candidates for certification in the state's approved programs.
- **The New Hampshire Higher Education Assistance Program (NHHEAF).** NHHEAF has a series of programs in its network, including the Teach for New Hampshire Loan Forgiveness Program and the Enterprise Teachers Program (See www.nhheaf.org for details.)
- **WIA Dislocated Workers Program.** This program seeks to recruit unemployed workers to teaching. It operates in collaboration with the New Hampshire Community and Technical College system and other institutions of higher education.
- **Workforce Incentive Program:** This program links higher education with critical workforce needs. There are two components to the program: an incentive for students to study in particular areas (forgivable loans) and assistance for employees in critical workforce shortage areas (loan repayment). For information about this program, visit www.nh.gov/postsecondary/finwork.html.
- **Troops to Teachers.** In 2001, NHDOE became part of the national Troops to Teachers program to encourage retired military to consider teaching as a career.
- **Enterprise Teacher:** The Enterprise Teacher Program is a joint project with the New Hampshire Department of Education and the New Hampshire Postsecondary Education Commission, funded by a federal Teacher Quality Enhancement Grant (2003-2007). The project is designed to recruit teachers certified through Alternative I or working on a plan toward certification through Alternative IV in one of the following critical shortage areas: Special Education, World Languages, Mathematics, Physics, Chemistry, Physical Science, and General Science. Enterprise teachers who commit to teach in an Enterprise Teacher School District for five years are eligible for educational loan repayments of up to \$20,000.00 over five years. Enterprise Teachers are provided a mentor by the school. Enterprise Teacher Schools are selected through a competitive application process based on school need, school board support, challenges in filling teacher positions, commitment to mentoring and involvement with the business community.

While these programs appear promising in increasing the number and quality of teachers who serve in NH schools, there is little data on the success of these programs in recruiting, training, and hiring educators in the critical shortage areas. An examination of program success rates could help administrators in designing a system to address the issue of critical shortage areas in teaching. A formal evaluation of the outcomes of these projects and programs would allow policymakers to determine which programs should receive continued funding and support.

Employment and Retention Patterns

The length of service for teachers in New Hampshire has previously been discussed in this report. As seen earlier in Exhibit 1, there are fewer older teachers and increasing numbers of younger teachers in the profession in New Hampshire. This probably accounts for the shifts in the number of years teaching shown in Exhibit 16 below. In the previous report (Mackin, 2003), there were proportionately more experienced teachers with 12 to 18 years of service and fewer in the 1-2 years of service category. Basically this means that the distribution of experience in New Hampshire teaching workforce has shifted from more veteran teachers in the group to more novice teachers.

Exhibit 16: Teachers Still Employed in 2005 Who Were Certified in 1984-85



These shifts toward more inexperienced teachers entering the profession, coupled with continued pressure to employ highly qualified teachers and fill critical shortage teaching areas, will put demands on the NHDOE and local school districts. The state must be vigilant in areas that affect the New Hampshire teacher workforce: recruitment, training, credentialing, hiring, and professional development. In addition, efforts to recruit and maintain a teaching workforce need to be coordinated at the state and district level and the state needs to provide valid information concerning the success of various initiatives. It is essential that all stakeholders in this process (NHDOE, IHEs, districts, and policymakers) understand the complex relationships between state policies that affect the academic and teacher preparation of candidates, recruitment of teachers particularly in critical shortage areas, and teacher retention and retirement trends. With coordinated efforts to provide the most qualified and highly trained teachers, New Hampshire can meet the demands to provide the state's students with quality educational experiences in the 21st century.

Conclusions

The following represents the conclusions of the study authors.

- The number of teachers employed in New Hampshire schools has remained relatively stable over the past four years. As expected, the increasing percentage of teachers over the age of 55 has resulted in increasing retirements. More than 350 teachers have retired each year since 2002. This trend is expected to continue for the next decade.
- Another indication of the considerable stability of the New Hampshire teacher workforce is the educator longevity trend data. Approximately half of individuals *who were certified to teach and were employed* twenty-one years ago have remained employed as teachers in the state in 2005. The distribution of experience in the New Hampshire teaching workforce has

shifted, however, from more veteran teachers in the group to more novice teachers.

- New Hampshire colleges and universities continue to supply the greatest percentage of teachers to NH's schools. There are also many candidates who apply for and receive certification through out-of-state professional educator preparation programs (Alternative II). This pathway is second only to Alternative I for teachers employed in New Hampshire schools, but the number of teachers who are certified through this pathway has been increasing in the past four years.
- Although the actual number of individuals employed as teachers through Alternatives III, IV and V is still quite low, the available data indicate that there is an upward trend in the number of persons who are becoming employed as teachers through these routes. It may be that this increase is due to the teacher recruitment initiatives. However, formal evaluations need to be conducted to ascertain the success of each of these initiatives in recruiting teacher candidates into the New Hampshire system.
- Available data show that the projected supply of teachers appears to be adequate to meet the demand in some areas such as Elementary Education and Social Studies. What is not certain, however, is the state's ability to fill positions in critical shortage teaching areas, such as Mathematics and Science. There are few individuals with academic training who are seeking teacher credentials in these critical need areas.
- It appears that the need for individuals with a General Special Education certificate is being met by New Hampshire professional educator preparation programs. However, teachers with more specialized Special Education credentials (e.g. Learning Disabilities, Emotionally Disturbed, etc.) are still in short supply. Inclusion of students with disabilities in regular classrooms has demonstrated the need for teachers with expertise and experience with this population of students.

Recommendations

The following represents the recommendations of the study authors, as well as questions for future research.

1. From the information available, it is apparent that clear and valid data on the teaching workforce is needed for policymakers in the NHDOE, the state legislature, and the districts. Accurate data on the number of teachers that

districts need to meet the needs of students is critical to the designation of critical shortage areas.

2. The effectiveness of initiatives and programs to train, attract, and retain educators across the state is not clear because of the paucity of data concerning teacher hiring patterns across districts in all certification areas, including the critical shortage areas. Evaluating and comparing various approaches would be valuable as the state makes decisions concerning programs.
3. Professional educator preparation programs in New Hampshire need to be kept informed about the needs of districts for teachers in all content areas. Such information could be used to encourage students to seek certification in the areas of critical shortage.
4. The NHDOE needs to make data collection and analysis of the teacher workforce a high priority. The state has not routinely presented analysis of the data it currently collects. From the time of the previous report to the writing of this report, there were no significant new sources⁶ of data to enhance public understanding of the trends in the teacher workforce. However, the new data management system, the Educator Information System (EIS), which is currently being developed at NHDOE, has the potential to increase the quality and accessibility of the data and thus promote more analysis, hopefully on an annual basis.
5. The NHDOE has not systematically collected information concerning the success of the candidates prepared by the different teacher preparation programs in the state. Given the increasing number of teacher job openings, accredited programs should share their outcome data with each other and state policymakers. It is unclear at the present time, what careers individuals in these programs choose if they do not become teachers or if they are employed as teachers in other states.
6. In addition to the success rates of Alternative I programs (e.g., the proportion of candidates who achieve certification from traditional programs), the state should examine the effectiveness of programs across all the alternative pathways. In particular, the cost-effectiveness of initiatives and programs supporting all non-traditional pathways, such as Alternatives III, IV, and V, should be examined.

⁶ It is true that more data are collected annually from sources that have been in existence since the writing of the previous report (e.g., Title 2 and Education Statistics reports). However, there were no newly instituted data sources such as mechanisms that track individual candidates from preparation programs to employment in New Hampshire districts to inform the analysis for this report.

References

Mackin, K.J. (2003). *Report on New Hampshire Educators: Credentialing and Employment Trends*. Concord, NH: The NH Department of Education.

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New Hampshire Department of Education (2005). *Title II Report on Teacher Training*. Concord, NH: NH Department of Education.

North Central Regional Education Laboratory website (www.ncrel.org)

Appendices

Appendix I

New Hampshire Professional Educator Preparation Programs and Candidate Endorsement Areas (2004-2005)

**Table I: Institutions of Higher Education by Endorsement Areas of Candidates:
Elementary, General Special Education, Early Childhood Education, and Combined
Elementary Endorsement Areas (2004-2005)**

New Hampshire Professional Educator Preparation Programs (listed alphabetically)	Elementary, General Special Education & Early Childhood Endorsement Areas (2004-2005)					
	Elementary Education	Early Childhood and PreK	General Special Education*	Combined Endorsement Areas		Totals
				Elementary and General Special Education	Elementary and other Certification Areas	
Antioch/ New England College	35	1	0	0	5	41
Chester College	0	0	0	0	0	0
Colby-Sawyer College	0	8	0	0	0	8
Dartmouth College	7	0	0	0	0	7
Franklin Pierce College	54	0	0	0	0	54
Granite State College	0	0	61	0	0	61
Keene State College	97	12	4	20	0	133
New England College	2	0	1	5	0	8
Plymouth State University	47	21	0	22	8	98
Rivier College	23	21	15	44	13	116
Southern New Hampshire University	8	5	3	15	0	31
St. Anselm College	0	0	0	0	0	0
University of New Hampshire	75	9	13	6	3	106
Upper Valley Teacher Institute	20	0	0	0	0	20
TOTALS	368	77	97	112	29	683

*The asterisks indicate critical shortage teaching areas in New Hampshire.

Table 2: Institutions of Higher Education by Endorsement Areas of Candidates in Mathematics and Science Education (2004-2005)

New Hampshire Professional Educator Preparation Programs (listed alphabetically)	Mathematics and Science Education (2004-2005)							
	Math Ed *	General Science Ed *	Biology Ed *	Earth Space Science*	Physical Science*	Chemistry*	Physics*	Totals
Antioch/New England College	0	4	8	0	0	0	0	12
Chester College	0	0	0	0	0	0	0	0
Colby-Sawyer College	0	0	0	0	0	0	0	0
Dartmouth College	2	0	0	0	0	0	0	2
Franklin Pierce College	2	0	1	0	0	0	0	3
Granite State College	0	0	0	0	0	0	0	0
Keene State College	3	0	2	0	0	0	0	5
New England College	1	0	1	0	0	0	0	2
Plymouth State University	6	0	1	0	0	0	0	7
Rivier College	19	0	5	0	0	0	0	24
Southern New Hampshire University	0	0	0	0	0	0	0	0
St. Anselm College	1	0	0	0	0	0	0	1
University of New Hampshire	9	4	15	2	1	0	0	31
Upper Valley Teacher Institute	0	1	0	0	0	0	1	2
Totals	43	9	33	2	1	0	1	89

*The asterisks indicate critical shortage teaching areas in New Hampshire.

Table 3: Institutions of Higher Education by Endorsement Areas in English Education, Social Studies, Language, and the Arts (2004-2005)

New Hampshire Professional Educator Preparation Programs (listed alphabetically)	English, Social Studies, Language, Arts (2004-2005)						
	English Education	Social Studies (5-12)	Art Education	World Language Education *	Music Education*	ESOL *	Totals
Antioch/New England College	0	0	0	0	0	0	0
Chester College	0	0	2	0	0	0	2
Colby-Sawyer College	3	2	3	0	0	0	8
Dartmouth College	2	2	0	0	0	0	4
Franklin Pierce College	5	8	1	0	0	0	14
Granite State College	0	0	0	0	0	0	0
Keene State College	11	14	0	7	3	0	35
New England College	0	0	0	0	0	0	0
Plymouth State University	8	9	14	3	2	0	36
Rivier College	9	9	3	3	0	0	24
Southern New Hampshire University	5	6	0	0	0	2	13
St. Anselm College	4	3	0	0	0	0	7
University of New Hampshire	7	21	4	7	24	0	63
Upper Valley Teacher Institute	5	2	1	2	0	0	10
Totals	59	76	28	22	29	2	216

*The asterisks indicate critical shortage teaching areas in New Hampshire.

Table 4: Institutions of Higher Education by Endorsement Areas in Business, Technology Education, and Career and Technical Education (2004-2005)

New Hampshire Professional Educator Preparation Programs (listed alphabetically)	Business, Technology, and Career and Technical Education (2004-2005)				
	Computer Technology Education*	Business Education	Family Consumer Education*	Career and Technical Education*	Totals
Antioch/New England College	0	0	0	0	0
Chester College	0	0	0	0	0
Colby-Sawyer College	0	0	0	0	0
Dartmouth College	0	0	0	0	0
Franklin Pierce College	0	0	0	0	0
Granite State College	0	0	0	0	0
Keene State College	1	0	0	0	1
New England College	0	0	0	0	0
Plymouth State University	0	0	0	0	0
Rivier College	0	0	0	0	0
Southern New Hampshire University	5	19	0	0	24
St. Anselm College	0	0	0	0	0
University of New Hampshire	0	0	0	0	0
Upper Valley Teacher Institute	0	0	0	0	0
	6	19	0	0	25

*The asterisks indicate critical shortage teaching areas in New Hampshire.

Table 5: Graduates of NH Professional Educator Preparation Programs in Other Endorsement Areas (2004-2005)

New Hampshire Professional Educator Preparation Programs (listed alphabetically)	Category 5: Other Endorsement Areas (2004-2005)					
	Physical Education	Health Ed	Mental Retardation*	Emotionally Disturbed*	Learning Disabilities*	Totals
Antioch/New England College	0	0	0	0	0	0
Chester College	0	0	0	0	0	0
Colby-Sawyer College	0	0	0	0	0	0
Dartmouth College	0	0	0	0	0	0
Franklin Pierce College	0	0	0	0	0	0
Granite State College	0	0	1	3	2	6
Keene State College	15	0	0	0	0	15
New England College	2	0	0	0	0	2
Plymouth State University	23	4	0	0	0	27
Rivier College	0	0	0	5	11	16
Southern New Hampshire University	0	0	0	0	0	0
St. Anselm College	0	0	0	0	0	0
University of New Hampshire	9	0	0	0	0	0
Upper Valley Teacher Institute	0	0	0	0	0	0
Totals	40	4	1	8	13	66