

# **CRITICAL TEACHER SHORTAGE AREAS**

**2005-2006**

Prepared for the State Board of Education  
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**METHODOLOGY FOR THE IDENTIFICATION OF  
TEACHER SHORTAGE AREAS  
2005-06**

Section 1012.07, Florida Statutes, requires that the State Board of Education annually identify areas of critical teacher shortage. This list of shortage areas is used in implementing the Critical Teacher Shortage Tuition Reimbursement Program and the Critical Teacher Shortage Student Loan Forgiveness Program. State Board of Education Rule 6A-20.0131(2) further provides that:

*In accordance with procedures approved by the Commissioner, a list of critical teacher shortage areas shall be prepared based on consideration of current supply and demand information related to Florida public school instructional personnel including but not limited to:*

- (a) The number and percentage of vacant positions in each teaching discipline;*
- (b) The number and percentage of positions filled by teachers not certified in the appropriate field;*
- (c) The projected annual supply of graduates of state approved Florida teacher education programs for each discipline.*

Based on the information outlined above, the following subject fields are being recommended to the State Board of Education for adoption as the critical teaching areas for 2005-06, the same fields as approved for 2004-05:<sup>1</sup>

- **middle and high school level mathematics;**
- **middle and high school level science;**
- **reading;**
- **exceptional student education programs (ESE);**
- **English for speakers of other languages (ESOL);**
- **foreign languages;**
- **school psychologists; and**
- **technology education/industrial arts.**

**Shortages During Fall 2003**

Each fall the Department of Education surveys the school districts to determine the number of teaching positions filled (new hires) from July 1 to November 1.<sup>2</sup> Results from this survey provide two indicators of fields currently facing critical shortages: the number of new hires as a percentage of teachers in each field and the number of positions filled by teachers who lack appropriate certification. A third measure of teacher shortages is the number of teachers currently teaching courses in subjects in which they are not certified.

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<sup>1</sup> See page 14 for the list of the critical teacher shortage areas for 1984-85 through 2004-05.

<sup>2</sup> New hires are new to the district, but may have taught in another district in prior years and, therefore, not be new to Florida public schools.

## Number of New Hires

According to the fall 2003 new hires survey, 19,317 classroom teachers and 978 other instructional personnel were hired between July 1 and November 1, higher than any previous year and an increase of 25 percent over fall 2002. (See Table 1.) The new hires represented 13.1 percent of all classroom teachers, up from 10-11 percent in earlier years.

Table 1  
Number of Fall New Hires – Classroom Teachers

	2000	2001	2002	2003
Fall New Hires	14,624	14,411	15,388	19,317
Classroom Teachers	134,504	136,888	141,004	147,957
As a Percentage of Teachers	10.9	10.5	10.9	13.1

Because 2003-04 marked the beginning of the implementation of the class size amendment to the State Constitution, the increase in new hires was not unexpected. In March 2003 the State Board of Education approved a teacher projection report that estimated that the number of classroom teachers that would be needed to fill vacancies in 2003-04 would total 22,582. Since the 19,317 total does not take into account those teachers hired after November 1, 2003, it appears that the March 2003 projection was realistic.

Table 2 displays the number of new hires as a percentage of the estimated number of teachers for the critical teacher shortage areas. Subject fields with the highest percentages of positions among those that were filled

Table 2  
Number of New Hires Compared to Total Number of Teachers - Fall 2003

Subject Fields	New Hires	Estimated Number of Teachers	New Hires as a Percentage of Teachers
Reading	359	4,068	8.8
Math	1,360	9,545	14.2
Science	1,173	8,050	14.6
Foreign Languages	360	2,331	15.4
ESOL	381	5,339	7.1
Industrial Arts/Technology Educ	77	768	10.0
Mentally Handicapped (MH)	170	1,399	12.2
Specific Learning Disabled (SLD)	260	2,075	12.5
Emotionally Handicapped (EH)	255	1,056	24.1
Varying Exceptionalities (VE)	1,817	9,640	18.8
Exceptional Student Education	12	0	0.0
Hospital/Homebound	13	230	5.7
Orthopedically Impaired (OI)	16	375	4.3
Speech Impaired	289	2,642	10.9
Hearing Impaired	66	383	17.2
Visually Impaired	14	224	6.3
Autistic	91	565	16.1
Profoundly Mentally Handicapped	26	944	2.8
Severely Emotionally Disturbed	88	364	24.2
Occupational/Physical Therapy	35	654	5.4
PreK Handicapped	104	756	13.8
Gifted	175	2,633	6.6
Exceptional Other	42	320	13.1
Total Exceptional	930	9,485	9.8
School Psychologist	91	1,229	7.4

in fall 2003 include severely emotional disturbed (SED), emotionally handicapped (EH), varying exceptionalities (VE), hearing impaired, foreign languages, science, and math. Although the fields of reading, gifted, visually impaired, and ESOL had proportionally fewer new hires, other measures of teacher shortage, particularly the number of new teachers hired out of field (discussed in the next section), merit their inclusion in the list of shortage areas.

### Newly-Hired Out-of-Field Teachers

A second indicator of teacher shortages used to identify critical teaching fields is the percentage of newly hired teachers who were not certified in the field that they were assigned to teach. Overall, 11.5 percent of the new hires in fall 2003 were not appropriately certified, lower than recent years. (See Table 3.)

Table 3  
Percentage of New Hires  
Not Certified in the Appropriate Field

	1994	1996	1998	2000	2001	2002	2003
Basic Fields	11.0	8.4	10.2	10.2	13.1	12.3	8.9
Exceptional Educ.	27.8	22.2	27.1	30.0	31.8	29.9	22.1
Vocational	12.3	9.0	11.4	15.4	20.6	9.9	9.3
Total	14.9	11.3	13.6	14.2	16.9	15.8	11.5

Some of the reasons districts gave for the lower percentages were:

1. As a by-product of the emphasis on hiring only “highly qualified teachers,” as defined by the Federal *No Child Left Behind Act of 2001*, districts made a special effort to locate appropriately certified teachers. Some districts did not permit their Title 1 schools to hire **any** out-of-field teachers.
2. The focus on smaller classes in grades K-3 resulted in districts hiring significantly more teachers certified in elementary education, typically easier to find than teachers certified in critical teacher shortage areas.
3. The collapsing of such certification areas as mentally handicapped, specific learning disabled, emotionally handicapped, varying exceptionalities, and related fields into one category, *exceptional student education*, has made it easier to find appropriately certified teachers for these areas. Similarly, the change in elementary certification coverage from 1-to-6 to K-to-6 has made it easier to recruit kindergarten teachers in field.

ESE programs continue to experience serious shortages. Despite the decrease in out-of-field teachers hired in fall 2003, the percentage continues to be significantly higher than other areas. More than one out of every five ESE teachers hired were not certified in the appropriate field.

Table 4 displays information on the number of new hires in fall 2003 for each of the fields being recommended as critical teaching areas. As shown in Column 3:

- Nearly half of the teachers hired to teach gifted classes lacked certification in this field. Principals sometimes fill such positions with experienced subject field teachers who lack the course work in gifted, but who later satisfy requirements for endorsement in this field, thus qualifying for tuition reimbursement

Table 4  
Number of New Hires Not Certified  
In the Appropriate Field  
Critical Teacher Shortage Areas - Fall 2003

Subjects	New Hires	New Hires Not Certified in the Appropriate Field	Percentage
Reading	359	60	16.7
Math	1,360	184	13.5
Science	1,173	160	13.6
Foreign Languages	360	38	10.6
ESOL	381	120	31.5
Industrial Arts/Technology Educ	77	18	23.4
Mentally Handicapped (MH)	170	36	21.2
Specific Learning Disabled (SLD)	260	47	18.1
Emotionally Handicapped (EH)	255	52	20.4
Varying Exceptionalities (VE)	1,817	483	26.6
Exceptional Student Education	12	0	0.0
Hospital/Homebound	13	2	15.4
Orthopedically Impaired (OI)	16	3	18.8
MH+SLD+EH+VE+OI (14-20)	2,543	623	24.5
Speech Impaired	289	2	0.7
Hearing Impaired	66	1	1.5
Visually Impaired	14	0	0.0
Autistic	91	24	26.4
Profoundly Mentally Handi (PMH)	26	5	19.2
Severely Emotionally Disturbed (SED)	88	13	14.8
Occupational/Physical Therapy	35	0	0.0
PreK Handicapped	104	13	12.5
Gifted	175	87	49.7
Exceptional Other	42	1	2.4
Total Exceptional	3,473	769	22.1
School Psychologist	91	2	2.2

- One fourth of the new hires in autistic and in the largest programs within ESE (mentally handicapped, emotionally handicapped, specific learning disabled [SLD], and varying exceptionalities [VE]) did not have the appropriate certification. The percentages were highest in VE and lowest in SLD.
- One third of the new hires in ESOL and nearly one fourth of those in technology education/industrial arts were hired out of field.
- Nearly 14 percent of the teachers hired to teach science and math, and 17 percent hired to teach reading lacked appropriate certification.
- Typically, few out-of-field teachers are hired in the areas of speech, hearing and visually impaired, and school psychology because of the highly specialized nature of these areas.

### **Teachers Currently Teaching in Areas in Which They Are Not Certified**

A third indicator of teacher shortage is the number of teachers currently teaching who lack appropriate certification. As shown in Table 5, the percentage of inappropriately certified teachers in these critical areas includes 35 percent in ESOL, 27 percent in gifted, 13-15 percent in reading, EH, and SED, 10-12 percent in VE, foreign languages, science, and math, and 7-9 percent in MH, autistic, PMH and school psychologist.

Table 5  
 Estimated Number of Teachers  
 Not Certified in the Area in Which They Are Teaching  
 Critical Teacher Shortage Areas - Fall 2003  
 Ranked by Percentage Not Appropriately Certified

Subject Field	Number Teachers	Est. FTE Teachers Not Approp. Certified	Percentage Not Approp. Certified
ESOL	5,339	1,860	34.8
Gifted	2,633	703	26.7
Reading	4,067	607	14.9
Emotionally Handicapped	1,056	143	13.5
Severely Emotionally Disturbed	944	125	13.3
Tech. Educ.	609	80	13.1
Varying Exceptionalities	9,640	1,193	12.4
Foreign Lang.	2,331	256	11.0
Science	8,050	824	10.2
Math	9,545	937	9.8
Mentally Handicapped	1,399	119	8.5
Autistic	565	47	8.3
Profoundly Mentally Handicapped	364	27	7.6
School Psychologist	1,229	86	7.0
Specific Learning Disabled	2,075	132	6.4
Physically Impaired	230	10	4.5
Hearing Impaired	383	8	2.0
Visually Impaired	224	4	1.6
Speech Impaired	2,642	19	0.7

Table 6 shows the trends since 1999 for ESE programs. As can be seen, EH and SED continue to experience critical shortages, as do programs in gifted and VE. As already mentioned, teachers are not typically hired out of field in speech because of the highly specialized nature of this area. Although certification options are available for speech professionals at the bachelor's level, these are time limited.

Table 6  
 Percentage of Teachers Not Certified in the Appropriate Field  
 Selected Exceptional Student Education Programs

Subject Fields	1999	2000	2001	2002	2003
Mentally Handi.	11.5	11.0	11.7	11.4	8.5
Specific Learning Disab.	9.8	9.2	11.5	9.3	6.4
Emotionally Handi.	18.2	18.6	21.7	17.8	13.5
Varying Excep.	16.8	17.5	17.1	17.6	12.4
Speech & Lanq. Disabled	3.0	0.9	0.9	1.0	0.7
Hearing Impaired	2.1	4.1	5.3	7.4	2.0
Visually Impaired	3.4	9.1	6.5	3.0	1.6
Autistic	6.8	8.3	11.9	13.3	8.3
Profoundly Ment. Handi.	13.5	12.0	9.7	12.0	7.6
Severely Emot. Disturbed	16.2	17.5	17.4	19.1	13.3
Gifted	16.9	16.2	16.0	25.8	26.7

The Critical Teacher Shortage Tuition Reimbursement Program is used to assist these teachers to pursue their required master's degree. There continues to be a shortage of speech teachers at the master's level to perform specific duties and to direct those at the bachelor's level.

## Components of Demand for New Teachers

The gap between supply and demand for teachers in these shortage areas needs to be put in context with the broader picture of teacher shortages. In the past Florida school districts have faced the challenge of filling more than 16,000 teacher positions. The most recent year that number increased to approximately 22,500. Historically, two trends have largely determined the size of this challenge: teacher turnover and student enrollment. Fall 2003 ushered in a third challenge: finding additional teachers to lower class size in core academic subjects.

### Teacher Turnover

Based on information from the school districts in the End of Year Survey (Staff Information Data Base), 9.8 percent of Florida's teachers left the classroom in 2002-03, higher than any other prior year. (See Tables 7 and 8.) The largest category by far is the number of teacher resigning voluntarily short of retirement. In 2002-03 resignations made up 62 percent of the total.

Table 7  
Number of Terminations - Classroom Teachers

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Resignations	4,872	7,350	7,080	8,000	8,889	8,538
Retirements	1,542	1,540	1,647	1,811	2,102	2,706
Other Reasons*	1,626	2,229	1,822	2,063	2,318	2,507
<b>Total</b>	<b>8,040</b>	<b>11,119</b>	<b>10,549</b>	<b>11,874</b>	<b>13,309</b>	<b>13,751</b>

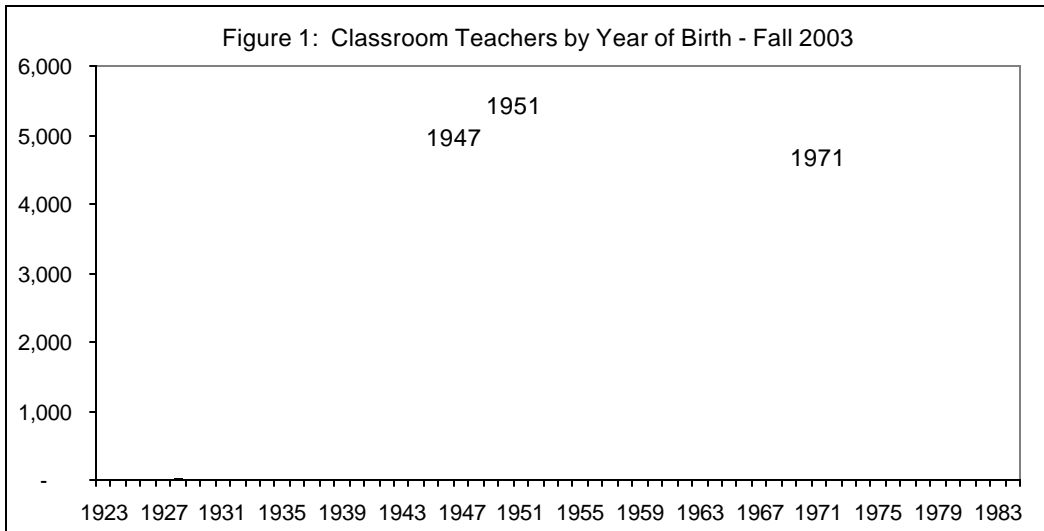
Table 8  
Teacher Terminations as a Percentage of the Teacher Workforce

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
Resignations	3.85	5.67	5.34	5.95	6.49	6.06
Retirements	1.22	1.19	1.24	1.35	1.54	1.92
Other Reasons*	1.28	1.72	1.37	1.53	1.69	1.78
<b>Total</b>	<b>6.35</b>	<b>8.57</b>	<b>7.96</b>	<b>8.83</b>	<b>9.72</b>	<b>9.75</b>

\* Includes deaths, dismissals, contracts expired, and staff reductions.

### Trends in Teacher Retirements

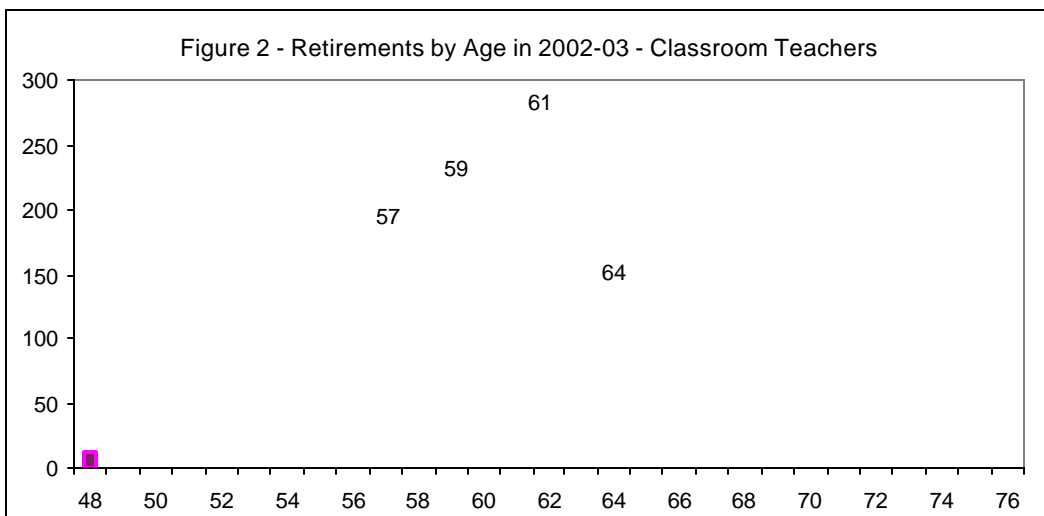
One fifth of Florida's classroom teachers were born before 1949 and are thus ages 55 or older. Another fifth were born between 1948 and 1955 and are ages 49 or older. (See Figure 1.) As shown in Table 7, the state has already begun to experience significant increases in the number of teacher retirements, with the likelihood that retirements will reach unprecedented heights in the decade following 2006.



The age group with the most job stability is teachers in their 40s and early 50s. The magnitude of the retirements expected from 2003 on is likely to be all the greater because by then mid-life teachers will represent teacher cohorts which were much smaller to begin with.

Figure 2 shows the number of retirements by age. More than half of the teachers retiring in 2002-03 were younger than 60, with most of these younger-age retirements taking place after the teachers reached 30 years of service in Florida public schools. Retirements peak at age 61, not at the assumed age of 65.

During 1999-2000 the retirement trends began to intersect with the age trend. Until that year more teachers had been born in 1947 than in any other year. By 1999 slightly more teachers were born in 1951 than in 1947, indicating that the teachers born in 1947 had begun to retire. The leading edge of the teachers born in 1947 reached 30 years of service in 2000-01, with the rest of the teachers in the 1947-1954 “bubble” reaching this level year by year. The teachers born in 1947 reach age 62 in 2009, but by that year it is likely that half of them will have already retired. Eighty percent of them are expected to retire by the year 2011.



**Effect of Enrollment Growth on the Number of Teachers Needed**

The second component of the number of new hires each year is the projected number of additional teachers needed to provide for increased enrollments. Florida has seen steady enrollment growth in preK-12 programs every year since 1982-83. Although the rate of growth is likely to slow over the next ten years, the state may still expect an additional 50,000 or more students each year, requiring from 2,000 to 3,000 additional teachers each year for enrollment growth alone.

### **Implementation of the Class Size Amendment and No Child Left Behind**

Teacher turnover and enrollment growth will continue to affect the size of the demand for new teachers. Added to these factors is the implementation of the class size amendment passed by Florida voters in 2002 and the federal No Child Left Behind Act, mandating, among other requirements, that there be a highly qualified teacher in every core-subject classroom by 2005-06. These legal mandates have the potential for exacerbating an already serious situation, expanding what has been a teacher shortage in specific subject areas to a more general teacher shortage.

The increased numbers of additional teachers stemming from the implementation of the class size amendment are projected at approximately 4,300 in 2004-05, 2,400 in 2005-06, with a jump to 11,821 in 2006-07, when school wide requirements will go into effect. Class size adjustments will then taper off. The Department has provided technical assistance to districts on implementation of highly qualified teacher requirements under No Child Left Behind. The Department's No Child Left Behind updates are viewable at: <http://info.fldoe.org/dscgi/ds.py/View/Collection-430>

### **Projected Number of Positions to be Filled in 2006-07**

Financial assistance provided to teachers during 2005-06 is most likely to affect the number of teachers available in 2006-07. Thus the focus of this report is on the projected number of positions to be filled in 2006-07. Table 9 shows the projected teacher demand stemming from each of the three components cited above.

For the academic core subjects (math, science, reading, foreign languages, and ESOL) additional teachers that will allow schools to reach class size targets total approximately half of all additional positions to be filled and about one fifth of the teachers already in those fields in 2005-06. (Elementary classrooms and language arts, two core subjects not on the critical teacher shortage list, will require about 7,400 additional teachers--6,100 to reduce class size in elementary and 1,300 in language arts.)

Among the critical teacher shortage areas, taking into account both core and non-core subjects, 56 percent of the teacher demand will be to replace teachers leaving the classroom or retiring, 34 percent to achieve class size targets, and 10 percent to provide for enrollment growth. Three fourths of the total need in these areas will likely occur in four fields--math, science, ESE, and ESOL. (See Table 9.)

Table 9  
 Projected Number of Teacher Positions to be Filled  
 Critical Teacher Shortage Areas

Subject Fields	Projected Number of Teachers 2005-06	Number Needed - 2006-07			Total Positions To Be Filled (Sum Cols 2-4)
		2 To Replace Teachers Leaving or Retiring	3 Provide for Enrollment Growth	4 Class Size Adjustment By-School Targets	
Math	10,507	1,039	147	1,122	2,308
Science	8,834	874	121	943	1,938
Reading	4,505	356	95	485	936
Foreign Languages	2,602	257	39	278	574
ESOL	5,966	325	132	643	1,100
Industrial Arts/Tech. Educ	810	64	12	0	76
Exceptional Student Education	15,429	1,984	305	0	2,289
Speech Impaired	2,816	251	65	0	316
Hearing Impaired	394	43	10	0	53
Visually Impaired	228	11	5	0	16
Autistic	511	66	9	0	75
Profoundly Mentally Handi.	389	21	7	0	28
Severely Emotionally Disturbed	936	69	17	0	86
Gifted	2,776	151	57	0	208
PreK Handicapped	704	77	0	0	77
School Psychologist	1,277	77	26	0	103

### Teacher Supply

Statistics on the number of Florida teacher education graduates used in this report are based on a survey of graduates completed annually by the education deans and chairpersons of the 30 institutions in Florida with approved teacher education programs. Each year's survey covers the actual number of graduates for the most recent year (2002-03, in the case of the 2003 survey used here) and three years of the projected number of graduates.

Studies tracking completers (graduates) indicate that, of those seeking initial certification (that is, those who were not already teaching prior to completing a program), about 61 percent taught in Florida public schools the year following graduation. Fifty-eight percent of the completers were still teaching four years later. No information is available on the number of education graduates who were teaching in nonpublic schools or teaching out of state.

### Trends in the Number of Teacher Education Graduates

Results from the annual teacher graduate survey are shown in Table 10. An analysis of the data presented pinpoints the following trends:

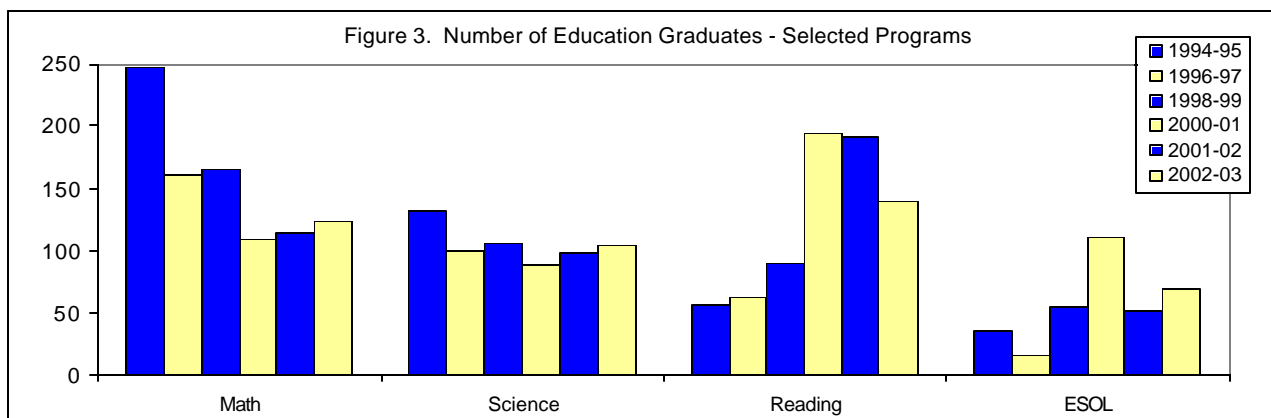
- Over the last five years, middle and high schools have seen sizeable increases in enrollments, but math and science have not kept pace. Although the number of math graduates was up slightly in

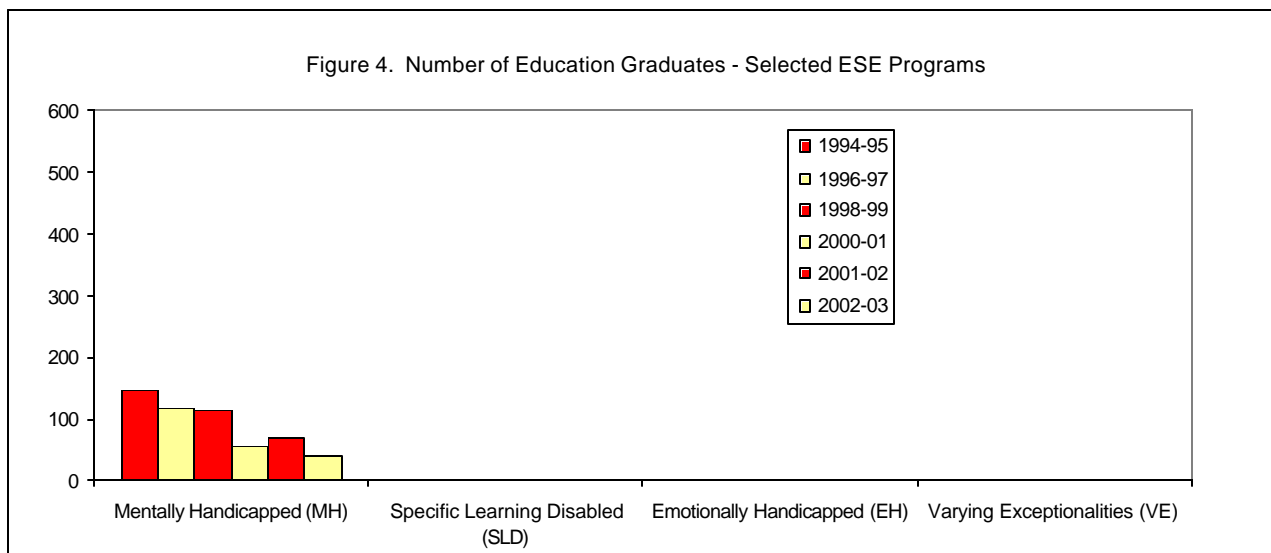
Table 10  
Number of Graduates - Teacher Education Programs

Programs	1994-95	1996-97	1998-99	2000-01	2001-02	2002-03
Math	247	161	166	109	115	124
Science	132	101	106	88	99	105
Reading	57	63	90	195	192	140
Foreign Languages	44	28	31	19	26	16
ESOL	36	16	55	110	52	70
Industrial Arts/Technology Educ	2	4	11	7	10	2
Mentally Handicapped (MH)	148	118	114	55	70	41
Specific Learning Disabled (SLD)	488	401	346	221	180	142
Emotionally Handicapped (EH)	247	164	133	82	64	33
Varying Exceptionalities (VE)	130	273	307	495	560	443
Orthopedically Impaired (OI)	9	16	7	-	-	-
Total MH+SLD+EH+VE+OI	1,022	972	907	853	874	659
Speech Impaired	99	79	135	150	140	25
Hearing Impaired	12	9	8	5	2	11
Visually Impaired	11	12	11	9	8	12
PreK Handicapped	0	1	2	-	-	-
Gifted	3	1	2	5	4	8
Dual ESE Programs						
ESE + ESOL	-	-	-	18	65	79
ESE + another subject	108	81	97	77	73	156
Total ESE	1,255	1,155	1,162	1,117	1,166	950
School Psychologist	46	7	34	39	45	73
Total (Including Other Classroom Programs)	5,837	6,027	6,143	5,564	5,744	5,936
Total (Including All Instructional Programs)	6,084	6,201	6,336	5,919	6,017	6,335

2002-03, the numbers are lower than they were in 1999-2000 and earlier. (See Figure 3.) The numbers of science graduates have not topped 120 since 1994-95. Moreover, most of science education graduates complete programs in biology rather than in the physical sciences, while the out-of-field statistics are highest in earth science and physics.

- The larger numbers of graduates in reading in 2000-01 and 2001-02 are an outgrowth of Florida's many-faceted efforts to boost reading skills at all levels.
- Increases in ESOL are being achieved through a growing number of dual programs, such as programs in elementary education and ESOL, or ESE and ESOL. Endorsement in ESOL is required for teaching classes that include students who are not proficient in English.





- Figure 4 illustrates the trend toward programs that cluster children with varying exceptionalities into the same classroom. The growth in VE notwithstanding, the numbers of graduates in ESE are down, despite the ongoing demand for additional teachers.
- The number of graduates in foreign languages remains low, especially when compared to the number of new hires in this field each year. However, it is likely that a number of foreign language teachers enter the classroom by way of a modern or classical foreign language degree. These teachers would then qualify for tuition reimbursement funds to help finance courses leading to full certification.
- Few graduates are shown for gifted and technology education. Most teachers in gifted programs become certified by means of an add-on to existing certification, not included in the statistics used here. The small numbers of graduates in technology education are indicative of its critical shortage status.

### **Projections of Teacher Education Graduates**

Table 11 shows the actual number of graduates for 2002-03 and projected numbers through 2005-06. For all fields, including those not included in this report, deans and chairpersons of Florida's teacher educational institutions projected a 6-percent decrease in the number of graduates by 2005-06, including an 11-percent decrease in exceptional education. During that time institutions will be folding traditional ESE programs in MH, EH, and SLD into a general program in ESE. It may be that some institutions did not take this change into consideration and therefore underprojected the number of graduates.

Among other critical shortage fields, modest increases are projected in math and science—questionable in the view that there has been little or no growth in these fields over the last five years. Growth is also projected for reading and school psychology. Decreases are projected for foreign languages and ESOL. Offsetting the projected number of graduates from ESOL programs is the expanding number of dual programs that bring an ESOL endorsement, while fulfilling certification requirements in another area, such as ESE or English or social studies. Such ESOL endorsements will soon be required for all programs in elementary education, pre-K primary, ESE, and English.

Table 11  
Number of Graduates - Teacher Education Programs  
2002-03 - 2005-06

Subjects	2002-03	P R O J E C T E D			% Change
		2003-04	2004-05	2005-06	2002-03 to 2005-06
Math	124	124	136	147	18.5
Science	105	92	107	120	14.3
Reading	140	170	182	193	37.9
Foreign Languages	16	19	17	15	-6.3
ESOL	70	43	46	47	-32.9
Industrial Arts/Technology Educ	2	2	1	1	-50.0
Mentally Handicapped (MH)	41	23	24	24	-41.5
Specific Learning Disabled (SLD)	142	61	63	64	-54.9
Emotionally Handicapped (EH)	33	24	25	25	-24.2
Varying Exceptionalities (VE)	443	448	426	462	4.3
Total MH+SLD+EH+VE	659	556	538	575	-12.7
Speech Impaired	25	24	23	21	-16.0
Hearing Impaired	11	7	10	10	-9.1
Visually Impaired	12	18	16	16	33.3
Gifted	8	8	13	21	162.5
Dual Programs in ESE					
ESE + ESOL	65	79	71	76	16.9
ESE + another subject	170	117	113	126	-25.9
Total ESE	950	809	784	845	-11.1
School Psychologist	73	91	85	90	23.3
Total (Including Other Classroom Programs)	5,936	5,495	5,292	5,603	-5.6
Total (Including All Instructional Programs)	6,335	5,840	5,646	5,988	-5.5

### **Projected Shortages for 2006-07**

Table 12 compares (1) the number of Florida teacher education graduates for 2002-03 and projected number for 2005-06 (Columns 1 and 4), with (2) the number of new hires in fall 2003 (Column 2) and the projected number in 2006-07 (Column 5). Columns 3 and 6 show the numbers of teacher education graduates as percentages of the numbers of new hires.

Even if the projected increases in the number of graduates are realized, the percentages for most of these fields are projected to be lower in 2006-07 than they were in 2003-04. Among the critical fields, Table 12 shows:

- The new hires in math and science were eleven times the number of graduates in 2002-03 (9.1 percent), but are projected to increase to sixteen times (6.3 percent) in 2006-07.
- The gaps between new hires and graduates are even wider for foreign language education and technology education.
- The percentage of graduates projected for reading programs (21 percent) is significantly higher than the other basic subjects. However, many of these completers will be seeking endorsement in reading as an adjunct to teaching elementary or language arts.
- While the percentage is higher for school psychologists (80-87 percent) than for other fields, districts rarely hire school psychologists out of field, partly because of the legal responsibility these professionals have in identifying students for inclusion in ESE programs.

- A wide gap remains between the number of new hires in the combined ESE programs (2,594 projected new hires) and the projected number of graduates (777, including dual programs). At-risk status depends partially on the depth of the reserve pool in each field. As evidenced by the percentage of inappropriately certified teachers hired, ESE programs have perpetually been behind, with the number of graduates never seeming to catch up with the demand.

Fields where the number of graduates is significantly smaller than the number of vacancies and fields where there are insufficient reserves are the ones most likely to face critical shortages. All of the subject fields above fall into one or both of these categories

Table 12  
Comparison of New Hires and Florida Teacher Education Graduates

Subject Fields	1		3	4		5	6
	Teacher Education Graduates	New Hires	Percentage Grads to New Hires (1/2)	Projected Florida Education Graduates	Projected Number New Hires Needed	Projected Percentage Grads to New Hires (4/5)	
Math	124	1,360	9.1%	147	2,308	6.4%	
Science	105	1,173	9.0%	120	1,938	6.2%	
Reading	140	359	39.0%	193	936	20.6%	
Foreign Languages	16	360	4.4%	15	574	2.6%	
ESOL	70	381	18.4%	47	1,100	4.3%	
Industrial Arts/Technology Educ	2	77	2.6%	1	76	1.3%	
Mentally Handicapped	41	170		24	-	-	
Specific Learning Disabled	142	260		64	-	-	
Emotionally Handicapped	33	255		25	-	-	
Varying Exceptionalities	443	1,817		462	-	-	
Exceptional Student Education	-	12		-	2,289	-	
Hospital/Homebound	-	13		-	-	-	
Orthopedically Impaired	-	16		-	-	-	
Autistic	-	91		-	75	-	
Profoundly Mentally Handi.	-	26		-	28	-	
Severely Emot. Disturbed	-	88		-	86	-	
PreK Handicapped		104			77	-	
Exceptional Other		42			39		
ESE + ESOL	79	-		76	-	-	
ESE + another subject	156	-		126	-	-	
Total Above ESE Fields	894	2,894	30.9%	777	2,594	30.0%	
Speech Impaired	25	289	8.7%	21	316	6.6%	
Hearing Impaired	11	66	16.7%	10	53	18.9%	
Visually Impaired	12	14	85.7%	16	16	100.0%	
Occupational/Physical Therapy		35		Licensure	45	-	
Gifted	8	175	4.6%	21	208	10.1%	
Total ESE	950	3,473		845	3,232	26.1%	
School Psychologist	73	91	80.2%	90	103	87.4%	
Total (Including Other Classroom Programs)	5,936	19,317	30.7%	5,603	29,604	18.9%	
Total (Including All Instructional Programs)	6,335	20,295	31.2%	5,988	30,861	19.4%	



CRITICAL TEACHER SHORTAGE AREAS  
FOR THE YEARS 1984-85 - 2004-05

1984-85	Math, science, speech therapy, emotionally, industrial arts, foreign languages
1985-86 1986-87	Math, science, emotionally handicapped, English, foreign languages
1987-88	Math, science, emotionally handicapped, foreign languages
1988-89	Math, science, emotionally handicapped, English, foreign languages
1989-90 1990-91 1991-92	Middle and secondary level science, math, and English; foreign languages; and exceptional education programs serving the handicapped.
1992-93	Middle and secondary level math and physical sciences; English for speakers of other languages (ESOL); exceptional education programs
1993-94 1994-95 1995-96	Exceptional education programs; ESOL
1996-97 1998-99 1999-00	Same as 1995-96, with the addition of technology education/industrial arts
2000-01	Same as 1999-2000, with the addition of middle and secondary mathematics and science
2001-02	Same as 2000-01 with the addition of foreign languages
2002-03	Same as 2001-02 with the addition of reading and school psychologist
2003-04 2004-05	Same as 2002-03