

**CRITICAL TEACHER SHORTAGE AREAS**  
**Florida Public Schools**

**2011-2012**

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## Contents

Methodology for the Identification of Teacher Shortage Areas for 2011-12 .....	1
Shortages During Fall 2009 .....	1
Number of New Hires .....	1
Table 1. Number of New Hires – Classroom Teachers (All Areas) .....	2
Table 2. Number of New Hires Compared to Total Number of Teachers – Fall 2009, Critical Teacher Shortage Areas .....	2
New Hires Hired Out of Field .....	2
Table 3. Percentage of New Hires Not Certified in the Appropriate Field .....	2
Table 4. Number of Out-of-Field New Hires – Fall 2009 Critical Teacher Shortage Areas .....	3
Teachers Currently Teaching in Areas in Which They Are Not Certified .....	4
Table 5. Number of Teachers Not Appropriately Certified Compared to Total Number of Teachers in Critical Teacher Shortage Areas – Fall 2009.....	4
Critical Teacher Shortage Areas: Financial Assistance Programs .....	5
Table 6. Tuition Reimbursement Awards by Category .....	5
Table 7. Loan Forgiveness Awards by Category .....	6
Table 8. Critical Teacher Shortage Areas: Awards by Certification Area .....	7
Teacher Supply – Teacher Education Completers by Sector .....	8
Table 9. Number of Teacher Education Completers by Sector .....	8
Critical Teacher Shortage Areas for the Years 1984-85 through 2011-12 .....	9

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## METHODOLOGY FOR THE IDENTIFICATION OF TEACHER SHORTAGE AREAS, 2011-12

Section 1012.07, Florida Statutes, requires that the State Board of Education annually identify critical teacher shortage areas. 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:

*(1) On or before December 1 of each year, the Commissioner shall recommend to the State Board for approval the specific teaching areas and high priority locations in which critical teacher shortages are projected for the public schools during the year following the academic year in which approval is made.*

*(2) 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 have been designated by the State Board of Education as critical teacher shortage areas for 2011-12.<sup>1</sup>

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

### Shortages During Fall 2009

The Department of Education surveys the school districts each fall to determine the number of teaching positions filled from July 1st to October 1st. Survey results provide two indicators of fields currently facing critical shortages which include: (1) the number of new hires as a percentage of teachers in each field and (2) the number of positions filled by teachers who lack appropriate certification.<sup>2</sup>

### Number of New Hires

The fall 2009 New Hires Survey indicates that districts hired 8,541 classroom teachers and 703 other instructional personnel between July 1st and October 1st. The new hires represented 5.1 percent of all classroom teachers teaching in fall 2009, compared to 6.3 percent in 2008, and 11.0 percent in 2007. (See Table 1) This decrease in the number of new hires reflects changes in the economy, accompanied by a drop in revenues, the restructuring of courses and the school day in some districts, a delay in requiring districts to meet class size targets at the classroom level, and teacher layoffs. Table 2 shows the number of new hires as a percentage of the estimated number of teachers for the critical teacher shortage areas.

<sup>1</sup> See page 9 for a list of critical teacher shortage areas for 1984-85 through 2011-12.

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

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Fall New Hires	21,919	21,282	18,930	10,604	8,541
Classroom Teachers	164,665	168,181	172,215	168,938	166,724
Percentage of New Hires	13.3	12.7	11.0	6.3	5.1

<b>Subject Field</b>	<b>New Hires</b>	<b>Estimated Number of Teachers</b>	<b>Percentage of New Hires</b>
English/Language Arts	715	10,286	7.0
Math	705	11,197	6.3
Science	778	9,261	8.4
Reading	343	5,369	6.4
Foreign Languages	203	3,657	5.6
ESOL	139	2,791	5.0
Technology Educ./Industrial Arts	48	597	8.0
ESE (Varying Excep., etc.)	887	16,128	5.5
Speech/Language Impaired	165	2,676	6.2
Hearing Impaired	15	398	3.8
Visually Impaired	3	246	1.2
Autism Spectrum Disorder	90	1,171	7.7
Occupational/Physical Therapy	12	556	2.2
Pre-K Handicapped	48	1,316	3.6
Gifted	86	2,256	3.8
Exceptional Other	68	548	12.4
Total Exceptional	1,374	25,308	5.4

### **New-Hires Hired Out-of-Field**

A second indicator used to identify critical teacher shortage fields is the percentage of newly hired teachers who were not certified in the field that they were assigned to teach. Overall, 5.3 percent of the new hires in fall 2009 were not appropriately certified, the lowest in the last 5 years. (See Table 3)

	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Basic Fields	8.6	10.1	9.0	7.0	5.1
Exceptional Student Educ.	15.1	16.7	14.5	9.1	6.5
Career Education	7.8	10.8	8.7	7.8	4.3
Total Classroom	9.6	11.1	9.8	7.3	5.3

Districts have reported that the decrease in the hiring out-of-field teachers that began about 2002 was due to:

- The emphasis on hiring only “highly qualified teachers,” as defined by the federal No Child Left Behind Act of 2001. Districts began making a special effort to locate appropriately certified teachers.

- The focus on smaller classes in grades K-3, resulting in districts hiring significantly more teachers certified in elementary education. Teachers with this certification are typically easier to find than teachers certified in critical teacher shortage areas.
- The collapsing of such certification areas as mentally handicapped, specific learning disabled, emotionally handicapped, varying exceptionalities, and related fields into one category, ESE, making it easier to find appropriately certified teachers for these areas. Similarly, the change in elementary certification coverage from grades 1-6 to grades K-6 has made it easier to recruit kindergarten teachers in field.
- Statutes enabling teacher applicants to document mastery of subject area knowledge, required for issuance of a Temporary or Professional Certificate, by achieving a passing score on a subject area examination. This has expanded certification options to those with academic degrees who have not completed an approved teacher education program. (See section on Teacher Supply beginning on page 9.)

Table 4 displays information on the number of new hires in fall 2009 for each of the fields designated as critical teacher shortage areas. As shown in Column 3:

- 29 percent of the teachers hired to teach middle or high school reading were not appropriately certified. Teachers are considered in-field for teaching reading at the elementary level if they are certified in either elementary education or reading. Thus it is easier to fill positions in elementary reading than positions in reading at the middle or high school level.
- 37 percent of the teachers hired to teach the gifted were not appropriately certified. Principals sometimes fill such positions with experienced subject area teachers who lack course work in gifted, but who may later satisfy requirements for endorsement in this field.
- 6 to 15 percent of the new hires in ESOL, hearing impaired, autism, and foreign languages were hired out of field.
- Approximately 4 percent of the teachers hired to teach ESE, science, and English were hired out-of-field.
- Typically, few out-of-field teachers are hired in the areas of speech pathology and occupational and physical therapy because of the highly specialized nature of these areas.

<b>Subject Field</b>	<b>New Hires</b>	<b>New Hires Not Certified in the Appropriate Field</b>	<b>Percentage of New Hires Not Certified in the Appropriate Field</b>
English/Language Arts*	715	31	4.3
Math*	705	14	2.0
Science*	778	33	4.2
Reading*	343	100	29.2
Foreign Languages	203	8	3.9
ESOL	139	21	15.1
Technology Educ./Industrial Arts	48	2	4.2
ESE (Varying Excep., etc.)	887	42	4.7
Speech/Language Impaired	165	1	0.6
Hearing Impaired	15	1	6.7
Visually Impaired	3	0	0.0
Autism Spectrum Disorder	90	7	7.8
Occupational/Physical Therapy	12	0	0.0
Pre-K Handicapped	48	7	14.6

<b>Table 4 (continued)</b>			
<b>Subject Field</b>	<b>New Hires</b>	<b>New Hires Not Certified in the Appropriate Field</b>	<b>Percentage of New Hires Not Certified in the Appropriate Field</b>
Gifted	86	32	37.2
Exceptional Other	68	0	0.0
Total Exceptional	1,374	89	6.5

\*Middle and high school grades

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

A third indicator of teacher shortage is the number of teachers currently teaching courses in subjects in which they are not certified. As shown in Table 5, the percentage of inappropriately certified teachers in these critical areas includes approximately 14 to 19 percent in reading, ESOL, foreign languages, and gifted; 6 to 7 percent in hearing and visually impaired; and 3 to 4 percent in autism, ESE, English, and science.

Data on out-of-field status may not be available for several fields where teachers qualify outside the usual certification process. For instance, a number of physical, occupational, and speech therapists are considered in field by virtue of satisfying licensure requirements rather than through state certification. Similarly, in career education fields, such as technology education, districts may hire individuals with expertise in that field, thus bypassing certification based on course requirements.

<b>Table 5. Number of Teachers Not Appropriately Certified Compared to Total Number of Teachers in Critical Teacher Shortage Areas – Fall 2009</b>			
<b>Subject Field</b>	<b>Estimated Number of Teachers</b>	<b>Estimated Number of Teachers Not Approp. Certified</b>	<b>Percentage Not Approp. Certified</b>
English/Language Arts*	10,286	325	3.2
Math*	11,197	237	2.1
Science*	9,261	369	4.0
Reading*	5,369	765	14.3
Foreign Languages	3,657	560	15.3
ESOL	2,791	478	17.1
Technology Educ./Industrial Arts	597	N/A	N/A
ESE (Varying Excep., etc.)	16,128	682	4.2
Speech/Language Impaired	2,676	N/A	N/A
Hearing Impaired	398	26	6.5
Visually Impaired	246	17	6.9
Autism Spectrum Disorder	1,171	39	3.3
Occupational/Physical Therapy	556	N/A	N/A
Pre-K Handicapped	1,316	15	1.1
Gifted	2,256	430	19.1
Exceptional Other	548	N/A	N/A

\*Middle and high school grades.



**Critical Teacher Shortage Areas**  
**Financial Assistance Programs**

The Florida Department of Education's Office of Student Financial Assistance administered two financial assistance programs designed to increase the number of qualified teachers in designated critical teacher shortage areas: the Critical Teacher Shortage Tuition Reimbursement Program and the Critical Teacher Shortage Student Loan Forgiveness Program.

The Critical Teacher Shortage Tuition Reimbursement Program provided financial support to qualified teachers by assisting them with the repayment of undergraduate and graduate education courses that will lead to certification in a critical teacher shortage subject area. Eligible applicants received payments of up to \$78 per credit hour, for a maximum 9 hours per award year or \$702. The program maximum amount eligible applicants may receive is up to \$2,808 for up to 36 semester hours. Awards were prorated based upon the number of eligible applicants and the appropriation provided by the Legislature. The average amount awarded in 2009-10 was \$103, which was an award of \$14 per credit hour or 18 percent of the maximum award.

As shown by Table 6, the proportion of awards to teachers in total exceptional student education programs under the Tuition Reimbursement Program dropped slightly from 31 percent in 2005-06 to 29 percent in 2009-10. At the same time, the proportion of awards to teachers seeking certification or endorsement in reading increased from 34 percent in 2005-06 to 40 percent in 2009-10.

Subject Field	Number					Percentage				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-10
Math	99	125	117	99	66	14.0	13.3	13.8	14.1	13.1
Science	60	94	86	71	47	8.5	10.0	10.1	10.1	9.3
Reading	239	333	277	236	200	33.7	35.5	32.6	33.7	39.6
Foreign Languages	24	31	28	13	10	3.4	3.3	3.3	1.9	2.0
ESOL	29	45	46	48	18	4.1	4.8	5.4	6.8	3.6
Total ESE	219	255	257	183	148	30.9	27.2	30.2	26.1	29.3
Tech. Educ.	21	22	19	19	10	3.0	2.3	2.2	2.7	2.0
Total	709	937	850	701	505	100.0	100.0	100.0	100.0	100.0

\*Based on statistics compiled by the Office of Student Financial Assistance

The Critical Teacher Shortage Student Loan Forgiveness Program provided financial assistance to eligible Florida teachers by assisting them in the repayment of undergraduate and graduate educational loans that led to certification in a critical teacher shortage subject area. Eligible applicants received an annual award of up to \$2,500 to repay undergraduate loans and \$5,000 for two years to repay graduate loans for support of postsecondary education study. Participants received up to a maximum of \$10,000 for the duration of the program.

For the 2009-10 award year, full-time teachers who were certified or licensed in, and taught in a critical teacher shortage area at least 180 days during the 2008-09 academic year, and who had educational loans and undergraduate degrees, received a maximum of \$443, 18 percent of the maximum award. Those with graduate degrees received a maximum of \$886, 18 percent of the maximum award.

Table 7 shows the numbers of Loan Forgiveness awards over the last five years. Most of the awards have gone to exceptional student education teachers, ranging from 67 percent in 2005-06 to 53 percent in 2009-10. The number of awards to teachers in math and science increased to 18 percent and 15 percent of the total, respectively.

Subject Field	Number					Percentage				
	2005-06	2006-07	2007-08	2008-09	2009-10	2005-06	2006-07	2007-08	2008-09	2009-10
Math	392	561	677	750	749	13.0	15.3	16.8	17.5	17.8
Science	366	496	598	660	641	12.1	13.6	14.9	15.4	15.2
Reading	34	80	110	134	254	1.1	2.2	2.7	3.1	6.0
Foreign Languages	48	69	78	74	77	1.6	1.9	1.9	1.7	1.8
ESOL	50	53	56	75	59	1.7	1.4	1.4	1.8	1.4
Total ESE	2,032	2,258	2,320	2,377	2,220	67.1	61.8	57.7	55.6	52.7
Tech. Educ.	17	17	20	23	18	0.6	0.5	0.5	0.5	0.4
Total	3,027	3,656	4,020	4,277	4,215	100.0	100.0	100.0	100.0	100.0

\*Based on statistics compiled by the Office of Student Financial Assistance

Table 8 provides additional information on awards in both programs. Data indicate the following trends:

- Most of the science teachers receiving Loan Forgiveness awards are certified in middle grades science or biology, while fewer are in the areas of earth science, chemistry, or physics. Similarly, most Tuition Reimbursement awards are provided to teachers furthering their education in middle grades science or biology.
- Most Tuition Reimbursement awardees in reading are seeking certification in reading rather seeking a reading endorsement.
- Critical teacher awards are particularly important to speech therapists, many of whom enter the classroom without a master's degree, a requirement for full certification in that field. Most of the awards to speech therapists are for loan forgiveness, as opposed to tuition reimbursement.

**Table 8. Critical Teacher Shortage Areas: Awards by Certification Area\***

Critical Teacher Shortage Area	2005-06		2006-07		2007-08		2008-09		2009-10	
	Loan Forgiv.	Tuition Reimburs.	Loan Forgiv.	Tuition Reimburs.	Loan Forgiv.	Tuition Reimburs.	Loan Forgiv.	Tuition Reimburs.	Loan Forgiv.	Tuition Reimburs.
Math (6-12)	212	58	313	76	376	69	413	52	431	46
Math (5-9)	180	41	248	49	301	48	337	47	318	20
Biology	155	27	203	41	260	37	314	29	272	20
Chemistry	33	4	46	13	73	9	57	5	46	5
Earth Space Science	12	4	25	1	32	3	52	5	68	6
Mid. Gr. Gen. Science	147	23	197	37	209	37	220	31	231	15
Physics	19	2	25	2	24	0	17	1	24	1
English (6-12)	0	0	0	0	0	0	0	0	61	19
English (5-9)	0	0	0	0	0	0	0	0	24	4
Reading Endorsement	0	34	0	43	0	34	0	36	0	20
Reading	34	205	80	290	110	243	134	200	137	157
Language Arts	0	0	0	0	0	0	0	0	32	0
American Sign Language	0	0	0	2	0	4	0	4	0	1
Chinese	0	0	0	0	0	0	0	0	0	1
French	10	4	13	4	12	2	12	0	12	0
German	1	0	1	0	1	1	2	0	1	0
Italian	0	0	0	0	0	1	0	0	0	0
Japanese	0	0	1	1	0	0	1	0	0	0
Latin	1	0	2	0	2	2	4	1	4	0
Spanish	36	20	52	24	63	18	55	8	60	8
ESOL Endorsement	0	12	0	13	0	20	0	21	0	8
ESOL	50	17	53	32	56	26	75	27	59	10
Mid. Gr. Int. Curr.	0	0	2	0	4	0	1	0	21	6
Autism Spectrum Disorders	40	2	67	3	96	9	73	3	1	6
Emotionally Handicapped	128	2	150	2	151	4	142	4	110	0
Exceptional Student Ed.	543	137	604	156	624	155	1,050	137	957	93
Hearing Impaired	23	1	28	2	32	0	29	0	32	3
Mentally Handicapped	59	2	90	2	84	2	67	0	59	0
Orientation and Mobility	0	0	0	0	0	1	0	0	0	0
Physically Impaired	4	1	5	0	8	0	10	0	11	0
Gifted	0	19	0	13	0	24	0	6	0	9
Pre-K Hand./Disab.	0	3	0	3	0	6	0	5	0	4
Sever/Profound Hand./Disab.	0	0	0	0	0	2	0	1	0	2
Specific Learning Disabilities	171	2	172	5	109	5	103	2	75	2
Speech/Lang. Impaired	253	26	298	43	290	33	277	24	260	22
Varying Excep.	803	24	832	22	913	15	614	5	703	6
Visually Impaired	8	0	12	4	13	1	12	1	12	1
Journalism	0	0	0	0	0	0	0	0	1	0
Oral Communication	0	0	0	0	0	0	0	0	1	0
School Psych.	88	18	120	32	157	20	183	27	174	0
Tech. Ed./Indust. Arts	17	21	17	22	20	19	23	19	18	10
<b>Total Disbursed Count</b>	<b>3,027</b>	<b>709</b>	<b>3,656</b>	<b>937</b>	<b>4,020</b>	<b>850</b>	<b>4,277</b>	<b>701</b>	<b>4,215</b>	<b>505</b>

\*Based on statistics compiled by the Office of Student Financial Assistance

### Teacher Supply – Teacher Education Completers by Sector

For many years statistics on teacher education completers have been based exclusively on a survey completed each year by the education deans and chairpersons of the Florida colleges and universities (public and private) with approved teacher education programs.

The report now also includes information on completers of district alternative certification programs, community college baccalaureate programs in education, and community college and university Educator Preparation Institutes (EPI). EPI programs are alternative certification programs specifically designed for non-education baccalaureate degree holders to enable them to meet educator certification requirements.

Table 9 summarizes the number of teacher education completers in each of these programs. In 2008-09 the traditional teacher education programs supplied 63 percent of the total number of completers, down from 80 percent in 2005-06. EPI programs now account for 18 percent of the total, up from 9 percent in 2006-07. Altogether, the number of completers has increased from 6,997 in 2005-06 to 9,876 in 2008-09.

<b>Table 9. Number of Teacher Education Completers by Sector</b>				
All Fields Except Educational Leadership				
Number				
Sector	2005-06	2006-07	2007-08	2008-09
SUS	4,106	4,507	4,463	4,861
ICUF	1,313	1,241	1,238	1,145
FCS	178	215	259	258
Total	5,597	5,963	5,960	6,264
SUS EPI		24	94	221
FCS EPI	86	715	1,321	1,741
Total	86	739	1,415	1,962
DAC	1,314	1,508	1,650	1,650
<b>Total</b>	<b>6,997</b>	<b>8,210</b>	<b>9,025</b>	<b>9,876</b>
Percentages				
Sector	2005-06	2006-07	2007-08	2008-09
SUS	58.7	54.9	49.5	49.2
ICUF	18.8	15.1	13.7	11.6
FCS	2.5	2.6	2.9	2.6
Total	80.0	72.6	66.0	63.4
SUS EPI		0.3	1.0	2.2
FCS EPI	1.2	8.7	14.6	17.6
Total	1.2	9.0	15.7	19.9
DAC	18.8	18.4	18.3	16.7
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

SUS = State University System

ICUF = Independent Colleges and Universities of Florida

FCS = Florida College System

EPI = Educator Preparation Institute

DAC = District Alternative Certification

**CRITICAL TEACHER SHORTAGE AREAS**  
**FOR THE YEARS 1984-85 THROUGH 2011-12**

1984-85	Math, science, speech therapy, emotionally handicapped, 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 student education programs serving the handicapped.
1992-93	Middle and secondary level math and physical sciences; English for speakers of other languages (ESOL); exceptional student education programs
1993-94 1994-95 1995-96	Exceptional student education programs; ESOL
1996-97 1997-98 1998-99 1999-00	Same as 1995-96: (Exceptional student education programs; ESOL), with the addition of technology education/industrial arts
2000-01	Same as 1999-2000: (Exceptional student education programs; ESOL, and technology education/industrial arts), with the addition of middle and secondary mathematics and science
2001-02	Same as 2000-01: (Exceptional student education programs; ESOL, technology education/industrial arts, middle and secondary mathematics and science), with the addition of foreign languages
2002-03	Same as 2001-02: (Exceptional student education programs; ESOL, technology education/industrial arts, middle and secondary mathematics and science, and foreign languages) with the addition of reading and school psychologists
2003-04, 2004-05 2005-06, 2006-07 2007-08	Same as 2002-03: middle and high school level mathematics, middle and high school level science, reading, exceptional student education programs, English for speakers of other languages (ESOL), foreign languages, school psychologists, and technology education/industrial arts.
2008-09	Same as 2007-08: middle and high school level mathematics, middle and high school level science, reading, exceptional student education programs, English for speakers of other languages (ESOL), foreign languages, and technology education/industrial arts, with the addition of middle and high school level English/language arts, and the deletion of school psychologists.
2009-10 2010-11 2011-12	Same as 2008-09: middle and high school level mathematics, middle and high school level science, middle and high school level English/language arts, reading, exceptional student education programs, English for speakers of other languages (ESOL), foreign languages, and technology education/industrial arts.

Florida Department of Education



Dr. Eric J. Smith, Commissioner