

# THE SUPPLY OF TEACHERS FROM TRADITIONAL AND ALTERNATIVE ROUTES OF PREPARATION

**Ed Boe and Bob Sunderland**

University of Pennsylvania

and

**Lynne Cook**

California State University, Dominguez Hills

TED Conference

November 10, 2006

# PROBLEMS

---

- Chronic shortage of teachers in special education and other fields.
- Lack of high quality national data on the preparation of teachers by traditional and alternative routes intended to reduce the shortage.

# OBJECTIVES

---

- To quantify the sources of the annual supply of special and general education teachers entering employment in public schools.
- To analyze in detail the supply of all teachers from traditional and alternative routes of preparation.
- To focus on the supply of special education teachers from traditional and alternative routes of preparation.

# NATIONAL DATA SOURCE

NCES's Schools and Staffing Survey: 2003-04

---

The first source of high-quality sample survey data on teachers by type of teacher preparation completed (i.e., traditional vs. alternative).

Caution: Numbers reported are subject to sampling and other errors; therefore, numbers reported are an approximation.

## **SASS QUESTION ON TEACHER PREPARATION:**

**“How did you obtain teaching methods coursework?”**

---

- Through an “alternative” program designed to expedite the transition to a teaching career.
- Through a bachelor’s degree program
- Through a fifth-year program
- Through a master’s degree program
- Through individual coursework
- Other (please specify)

# TYPES OF TEACHER PREPARATION

---

- TRADITIONAL TEACHER PREPARATION
  - Traditional Degree Programs (BA/BS & Master's)
  - Other Traditional (e.g., fifth year programs)
- ALTERNATIVE TEACHER PREPARATION
  - Alternative Programs
  - Other Alternative (e.g., take courses)
- NO TEACHER PREPARATION

# COMMON TERMS

---

- SETs: Special Education Teachers
- GETs: General Education Teachers
- TTP: Traditional Teacher Preparation
- ATP: Alternative Teacher Preparation

# FIRST RESEARCH QUESTION

---

What sources of annual supply produce teachers entering employment in public schools,

and

How do SETs and GETs differ?

# MAIN SOURCES OF TEACHER SUPPLY FOR PUBLIC SCHOOLS

---

- ENTERING TEACHING EMPLOYMENT ANNUALLY: 8%
  - > First-Time Teachers
  - > Experienced Teachers
    - Reentering Experienced
    - Private School Migrants
- CONTINUING TEACHERS FROM PRIOR YEAR: 92%

# Sources of Teachers Entering Teaching Employment in Public Schools for the 03-04 School Year

## First Time

Special Education

4.0%

General Education

4.0%

## Experienced

### Reentering

Special Education

3.8%

General Education

3.2%

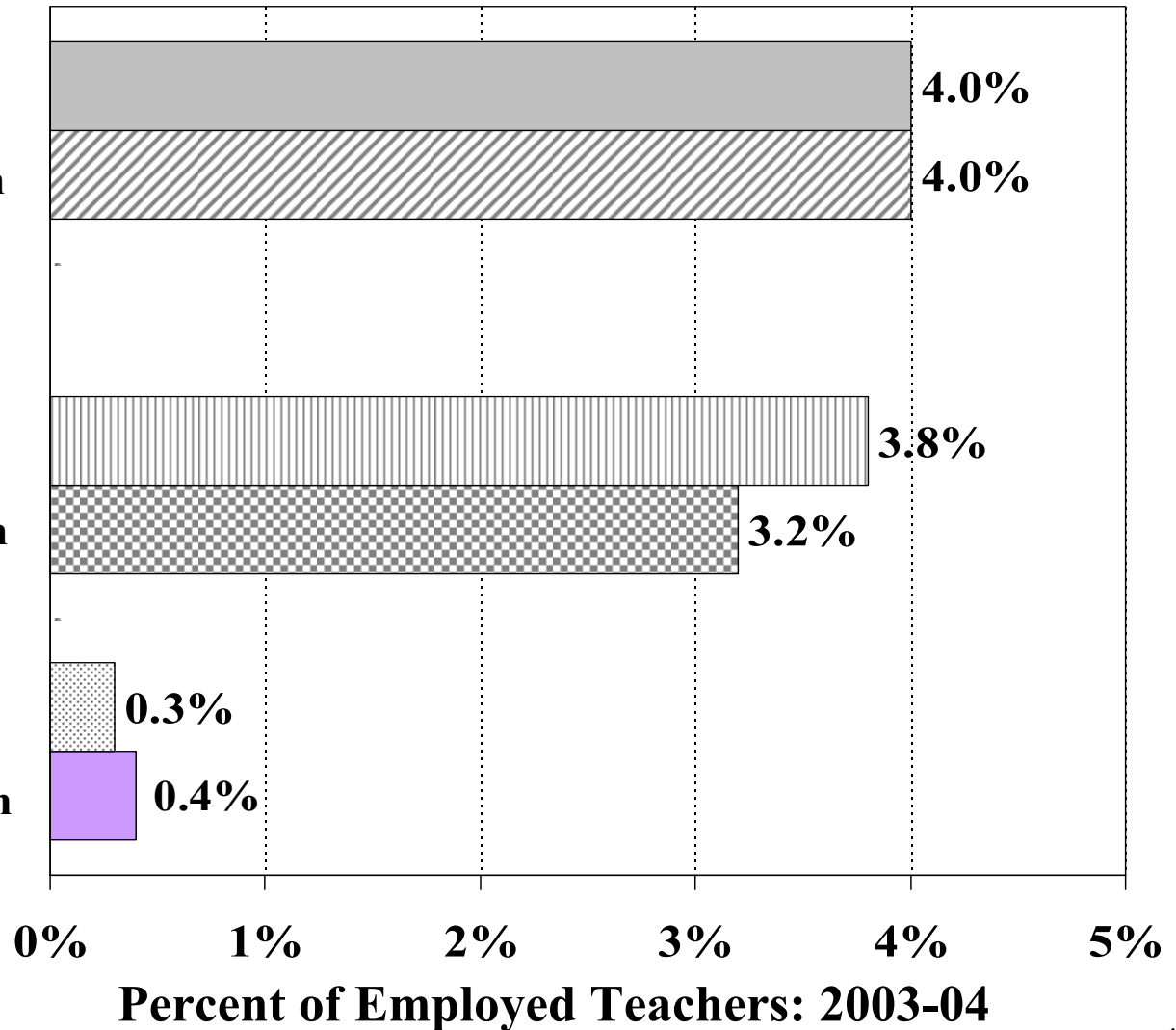
### Private Migrants

Special Education

0.3%

General Education

0.4%

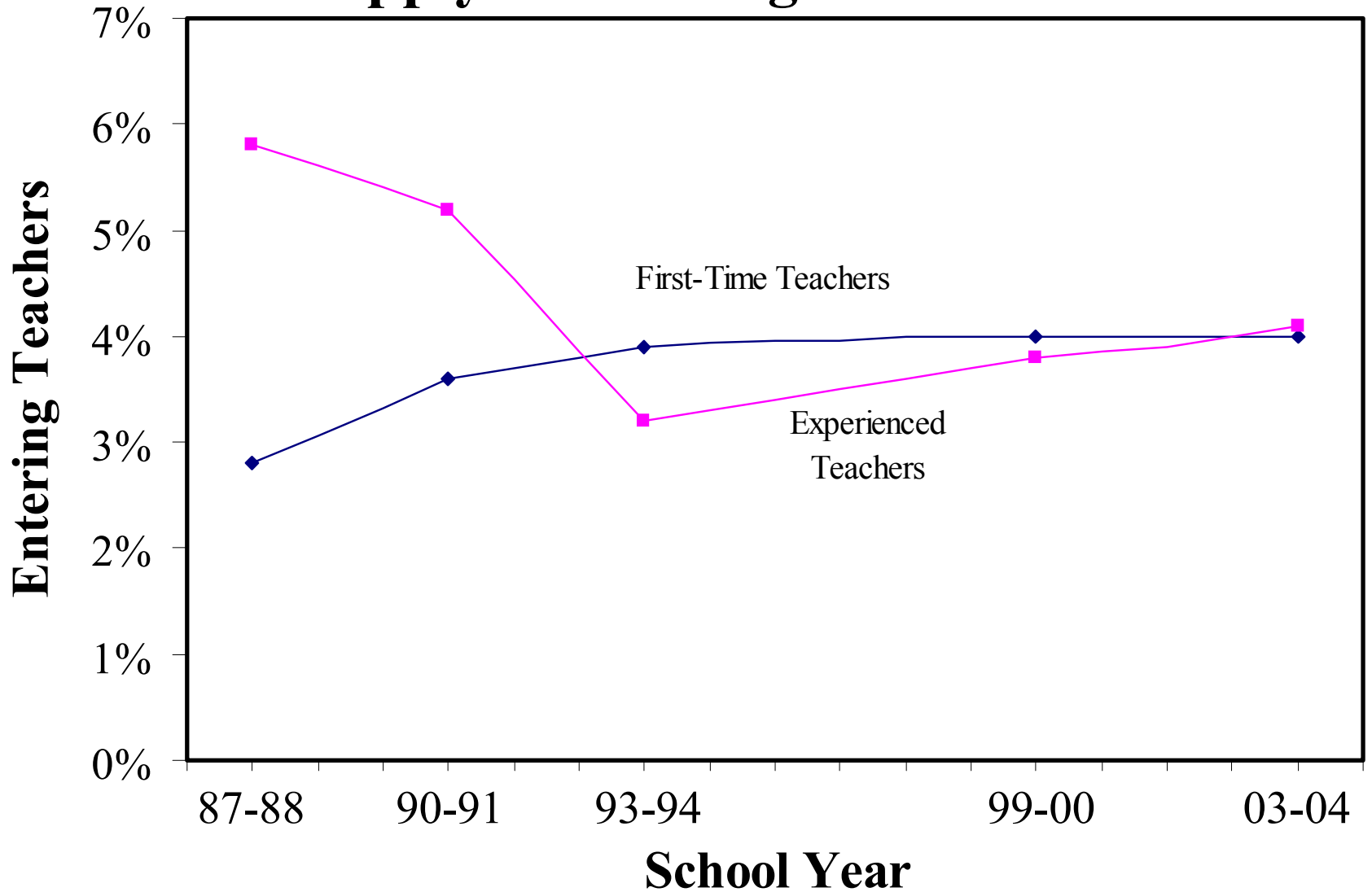


# TRENDS IN THE SUPPLY OF ENTERING SPECIAL EDUCATION TEACHERS

---

In its 1997 Annual Report to Congress, OSEP stated a concern that the supply of experienced teachers in the reserve pool was being depleted.

# Special Education Teachers: Supply of Entering Teachers



# Conclusions to First Question

---

- SETs and GETs do not differ in the sources of supply producing entering teachers.
- Entering teachers account for about 8% of the national teaching force in public schools each year.
- About half of entering teachers are first-time teachers, while the other half are experienced teachers, most of whom reenter teaching employment after a break.
- The experienced teacher component of the reserve pool has continued to produce about half of all entering SETs during the past 10 years.

# SECOND RESEARCH QUESTION

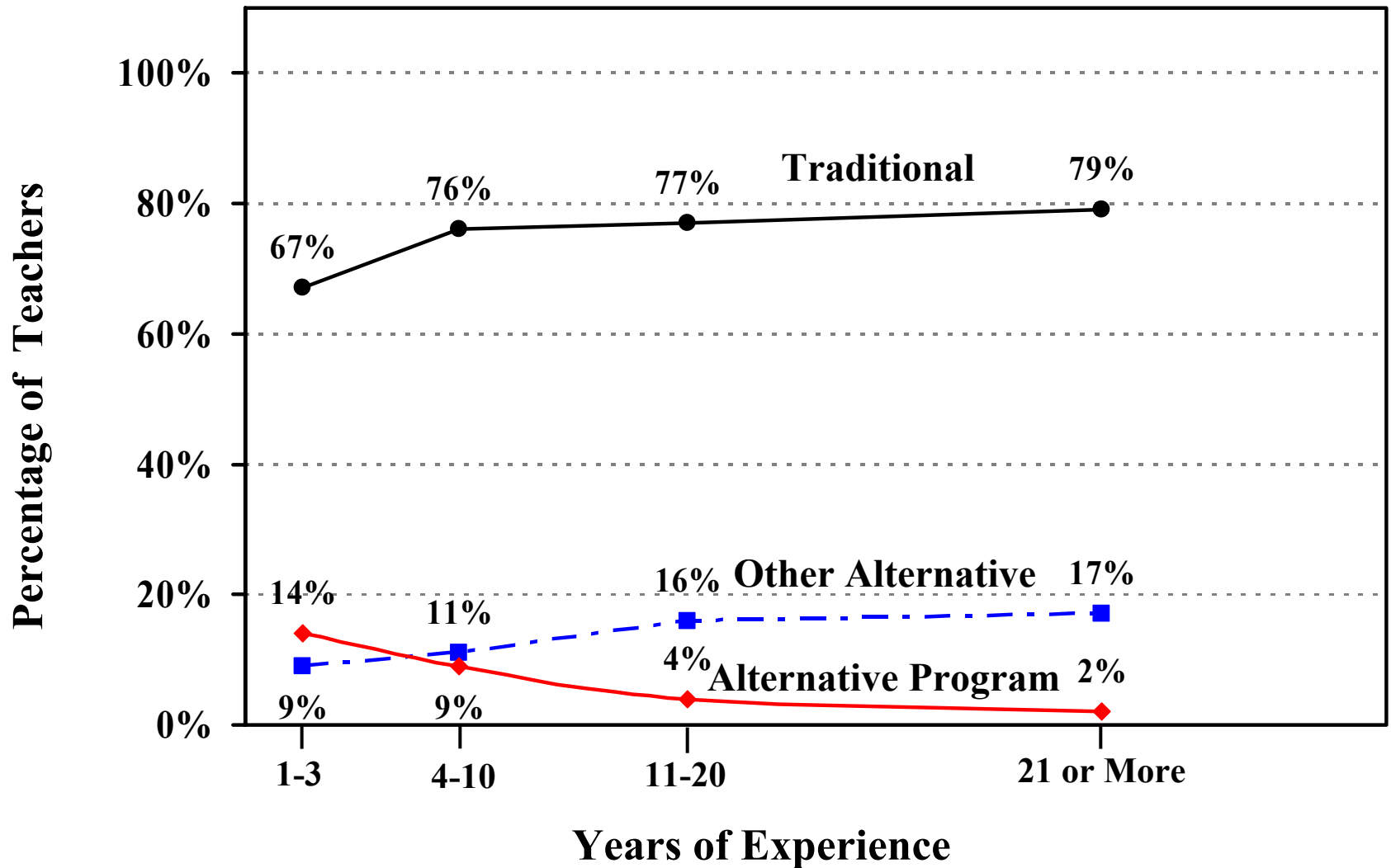
---

- What is the prevalence of teachers employed in public and in private schools (aggregated) who completed various types of preparation?

## Percent of public and private school teachers (combined) by type of preparation and years of experience: 2003-04

Type of Teacher Preparation		Public and Private School Teachers by Years of Experience				
		1 - 3	4 - 10	11 - 20	21 or More	Total
		Column Percents (%)				
<b>A. Traditional</b>	<b>1. Degree Programs</b>	60 %	65 %	67 %	70 %	66 %
	<b>2. Other Traditional</b>	7 %	11 %	10 %	9 %	10 %
	<b>Subtotal</b>	67 %	76 %	77 %	79 %	76 %
<b>B. Alternative</b>	<b>1. Alternative Programs</b>	14 %	9 %	4 %	2 %	6 %
	<b>2. Other Alternative</b>	9 %	11 %	16 %	17 %	14 %
	<b>Subtotal</b>	23 %	20 %	20 %	19 %	20 %
<b>C. None</b>	<b>No Preparation</b>	10 %	4 %	3 %	2 %	4 %
<b>Column Total</b>		100 %	100 %	100 %	100 %	100 %

# Type of Preparation by Years of Experience [Public and Private Teachers Combined]



# Conclusions to Second Question

---

- TTP Programs produce the majority (60%) of beginning teachers in public and private schools, while ATP Programs produce a substantial amount as well (14%).
- ATP Programs produce about 25,000 first-time teachers in public and private schools each year.
- All ATP routes to teaching have produced about 20% of all first-time teachers for over 20 years.
- In recent years, ATP Programs have become predominant over other ATP routes to teaching.

# THIRD RESEARCH QUESTION

---

- How does the preparation of public and private school teachers differ?

## Percent of public and private school teachers (separately) by type of preparation and years of experience: 2003-04

Type of Teacher Preparation		Sector by Years of Teaching Experience			
		1 – 3 Years		21 or More Years	
		Column Percents (%)		Column Percents (%)	
		Public	Private	Public	Private
<b>A. Traditional</b>	<b>1. Degree Programs</b>	<b>64 %</b>	<b>43 %</b>	<b>70 %</b>	<b>67 %</b>
	<b>2. Other Traditional</b>	<b>7 %</b>	<b>4 %</b>	<b>9 %</b>	<b>7 %</b>
	<b>Subtotal</b>	<b>71 %</b>	<b>47 %</b>	<b>79 %</b>	<b>74 %</b>
<b>B. Alternative</b>	<b>1. Alternative Programs</b>	<b>15 %</b>	<b>7 %</b>	<b>2 %</b>	<b>2 %</b>
	<b>2. Other Alternative</b>	<b>7 %</b>	<b>16 %</b>	<b>17 %</b>	<b>19 %</b>
	<b>Subtotal</b>	<b>22 %</b>	<b>23 %</b>	<b>19 %</b>	<b>21 %</b>
<b>D. None</b>	<b>No Preparation</b>	<b>7 %</b>	<b>30 %</b>	<b>2 %</b>	<b>5 %</b>
<b>Column Total</b>		<b>100 %</b>	<b>100 %</b>	<b>100 %</b>	<b>100 %</b>

# Conclusions to Third Question

---

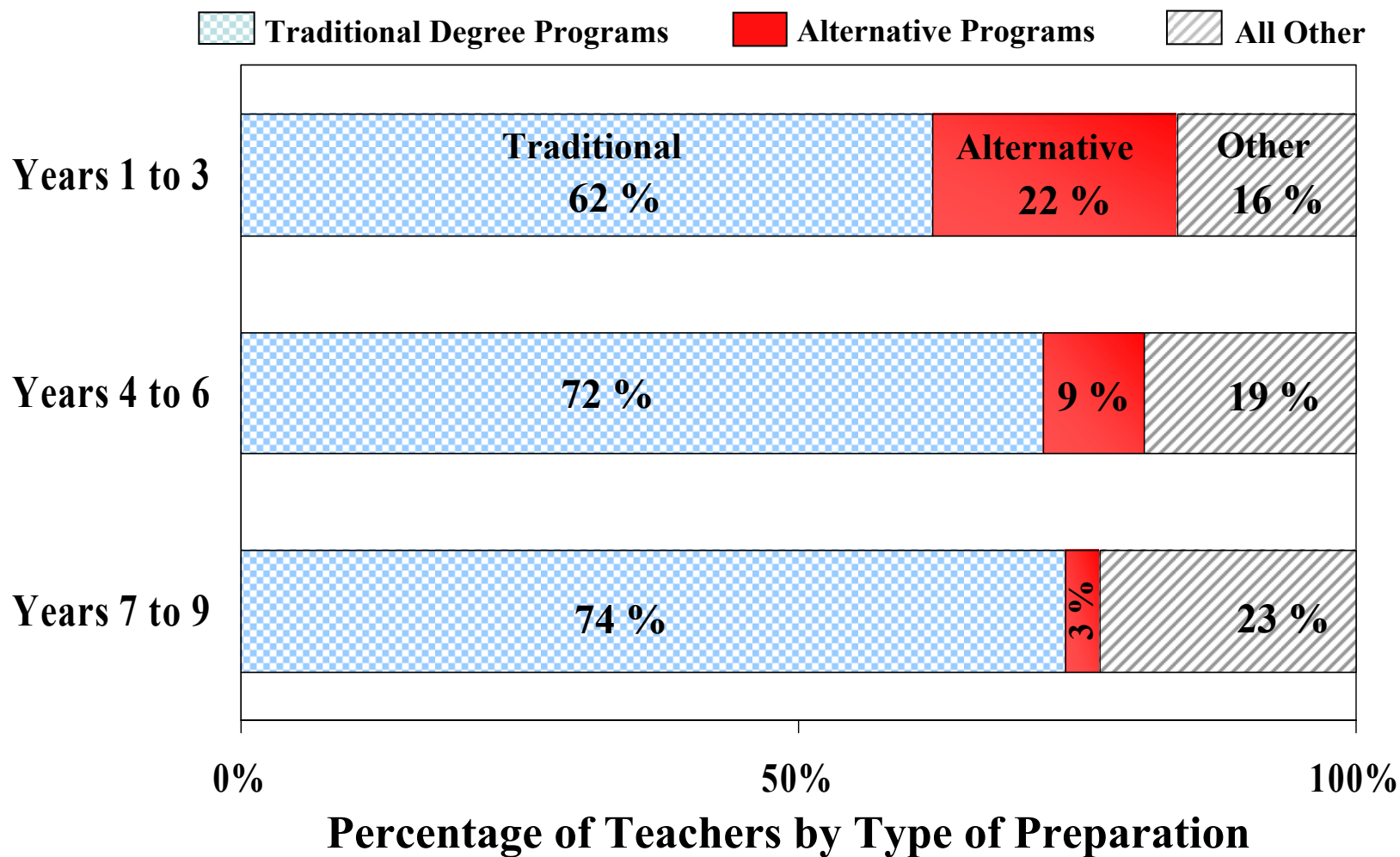
- During the first three years of teaching, 79% of public teachers are produced by organized TTP and ATP Programs, whereas 46% of private teachers either have no preparation or have irregular alternative preparation.
- For public and private teachers remaining after 20 years of teaching, about 75% completed TTP and 20% ATP.
- Thus, beginning private teachers are much less prepared than public teachers, but highly experienced public and private teachers are both quite well prepared.

# FOURTH RESEARCH QUESTION

---

- What is the prevalence of public school SETs who completed various types of preparation?

# Special Education Teacher Supply by Years of Teaching Experience



# Conclusions to Fourth Question

---

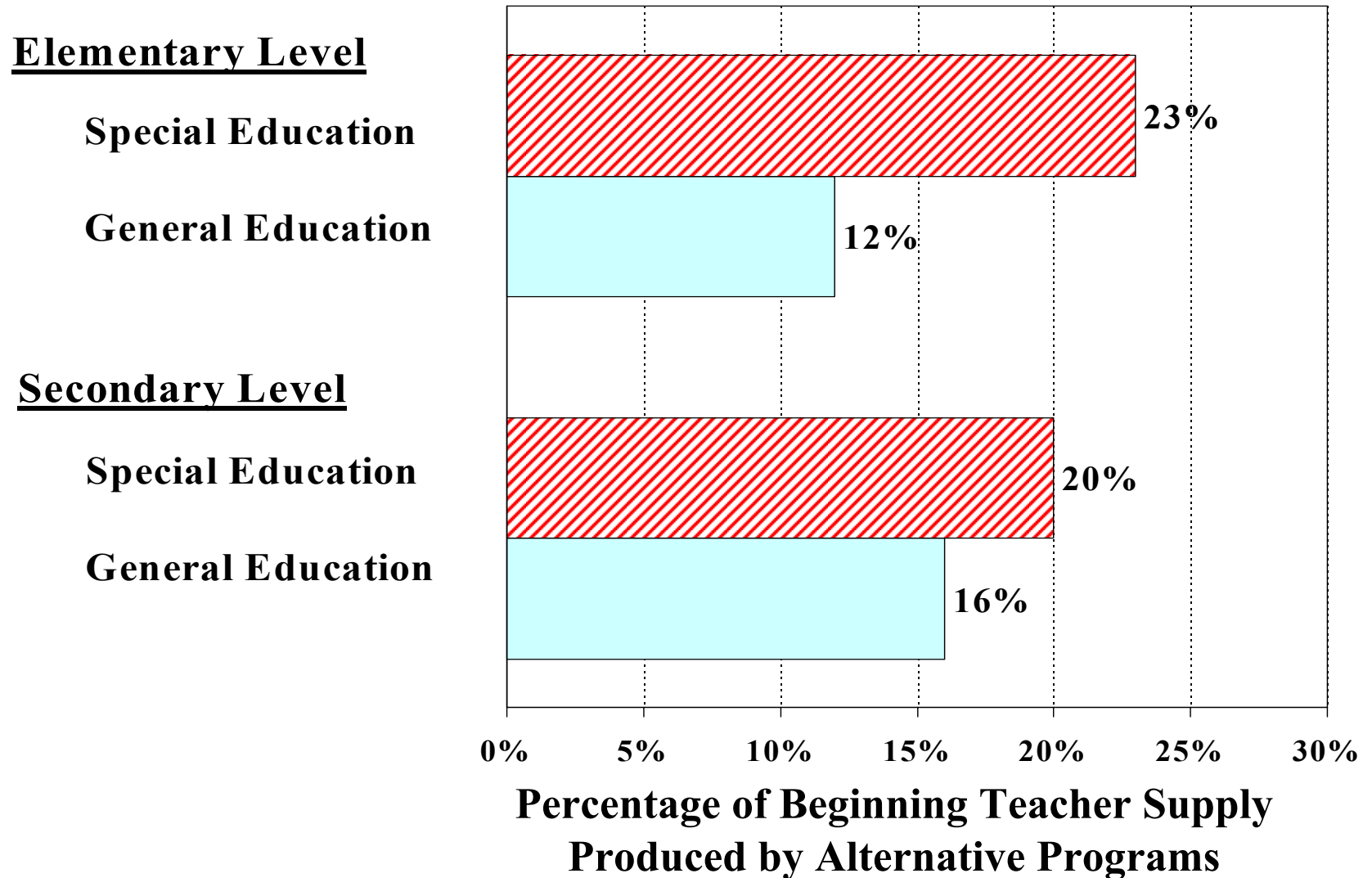
- During the past nine years, ATP Programs have produced a sharply increasing percent of SETs, while TTP Programs have produced a declining percent.
- By 2003-04, ATP Programs produced 22% of beginning SETs, compared with only 15% of all public teachers.

# FIFTH RESEARCH QUESTION

---

- Does the prevalence of SETs and GETs with alternative teacher preparation vary with teaching level?

# Beginning Teacher Supply from Alternative Programs by Teaching Level and Field (with 1-3 Years of Experience)



# Conclusions to Fifth Question

---

- ATP Programs produce an equivalent percentage of beginning SETs at the elementary and secondary levels (about 22%).
- ATP Programs produce a significantly higher percentage of beginning GETs at the secondary level (16%) than at the elementary level (12%)
- In terms of numbers of beginning teachers produced by ATP Programs, there were many more elementary than secondary SETs (9K vs. 5K), but many more secondary than elementary GETs (33K vs. 22K)

# SIXTH RESEARCH QUESTION

---

- How much preparation was obtained by beginning public school teachers who completed various types of preparation?

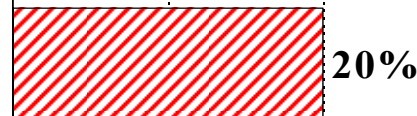
## Percent of beginning public school teachers by number of teaching methods courses and years of experience ( 2003-04)

Type of Teacher Preparation		Number of Methods Courses and Years of Teaching			
		1 or 2 Courses		5 or More Courses	
		1 Year	3 Years	1 Year	3 Years
<b>A. Traditional</b>	<b>1. Degree Programs</b>	19 %	16 %	53 %	52 %
	<b>2. Other Traditional</b>	10 %	12 %	64 %	75 %
	<b>Subtotal</b>	18 %	15 %	54 %	55 %
<b>B. Alternative</b>	<b>1. Alternative Programs</b>	44 %	18 %	28 %	57 %
	<b>2. Other Alternative</b>	34 %	21 %	25 %	40 %
	<b>Subtotal</b>	41 %	19 %	27 %	50 %
<b>Total</b>		23 %	16 %	48 %	55 %

# Beginning Special Education Teacher Supply by Number of Methods Courses (with 1-3 Years of Experience)

## Traditional Degree Programs

1 or 2 Methods Courses



3 or 4 Methods Courses

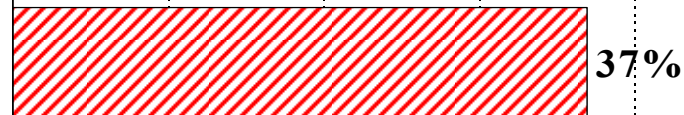


5 or More Methods Courses



## Alternative Programs

1 or 2 Methods Courses



3 or 4 Methods Courses



5 or More Methods Courses



0% 10% 20% 30% 40% 50% 60%

## Beginning Special Education Teacher Supply

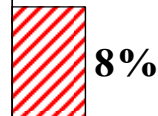
## Percent of first-year public school teachers by number of weeks of practice teaching completed (2003-04)

Type of Teacher Preparation		First Year Teachers by Weeks of Practice Teaching		
		None	1 - 7 Weeks	8 or More Weeks
		Row Percents (%)		
<b>A. Traditional</b>	<b>1. Degree Programs</b>	6 %	4 %	90 %
	<b>2. Other Traditional</b>	3 %	3 %	94 %
	<b>Subtotal</b>	<b>5 %</b>	<b>4 %</b>	<b>91 %</b>
<b>B. Alternative</b>	<b>1. Alternative Programs</b>	51 %	21 %	28 %
	<b>2. Other Alternative</b>	37 %	13 %	50 %
	<b>Subtotal</b>	<b>47 %</b>	<b>19 %</b>	<b>34 %</b>
<b>Total</b>		<b>14 %</b>	<b>8 %</b>	<b>78 %</b>

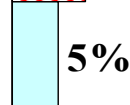
# Beginning Special Education Teacher Supply by Weeks of Practice Teaching (with 1-3 Years of Experience)

## Traditional Degree Programs

0 Weeks Practice



1 - 7 Weeks Practice

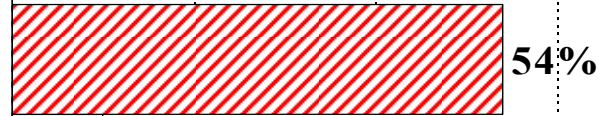


8 or More Weeks Practice

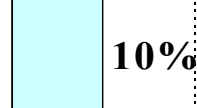


## Alternative Programs

0 Weeks Practice



1 - 7 Weeks Practice



8 or More Weeks Practice



0% 20% 40% 60% 80% 100%

## Beginning Special Education Teacher Supply

# Conclusions to Sixth Question

---

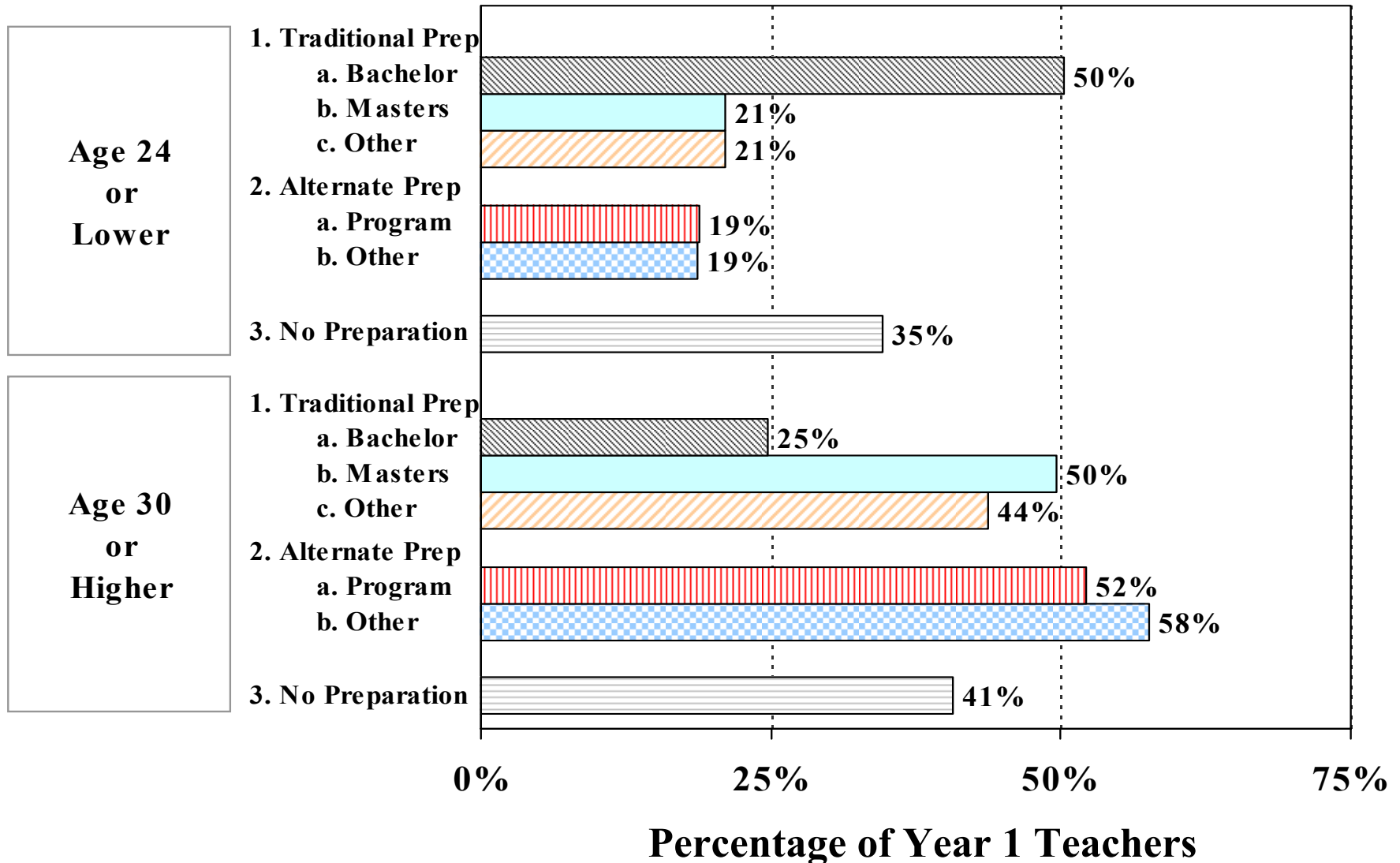
- First year teachers from ATP Programs had only half as many teaching methods courses as those from TTP Programs.
- By the third year of teaching, teachers from TTP Programs completed as many methods courses as those from TTP Programs.
- Almost all (90%) first-year teachers from TTP Programs completed 8 or more weeks of practice teaching, compared with only 28% from ATP Programs.

# SEVENTH RESEARCH QUESTION

---

- To what extent did ATP enroll novice teachers who were older and therefore had more life experience?

# Age at entry to teaching : Percent of first-year public teachers



# Conclusions to Seventh Question

---

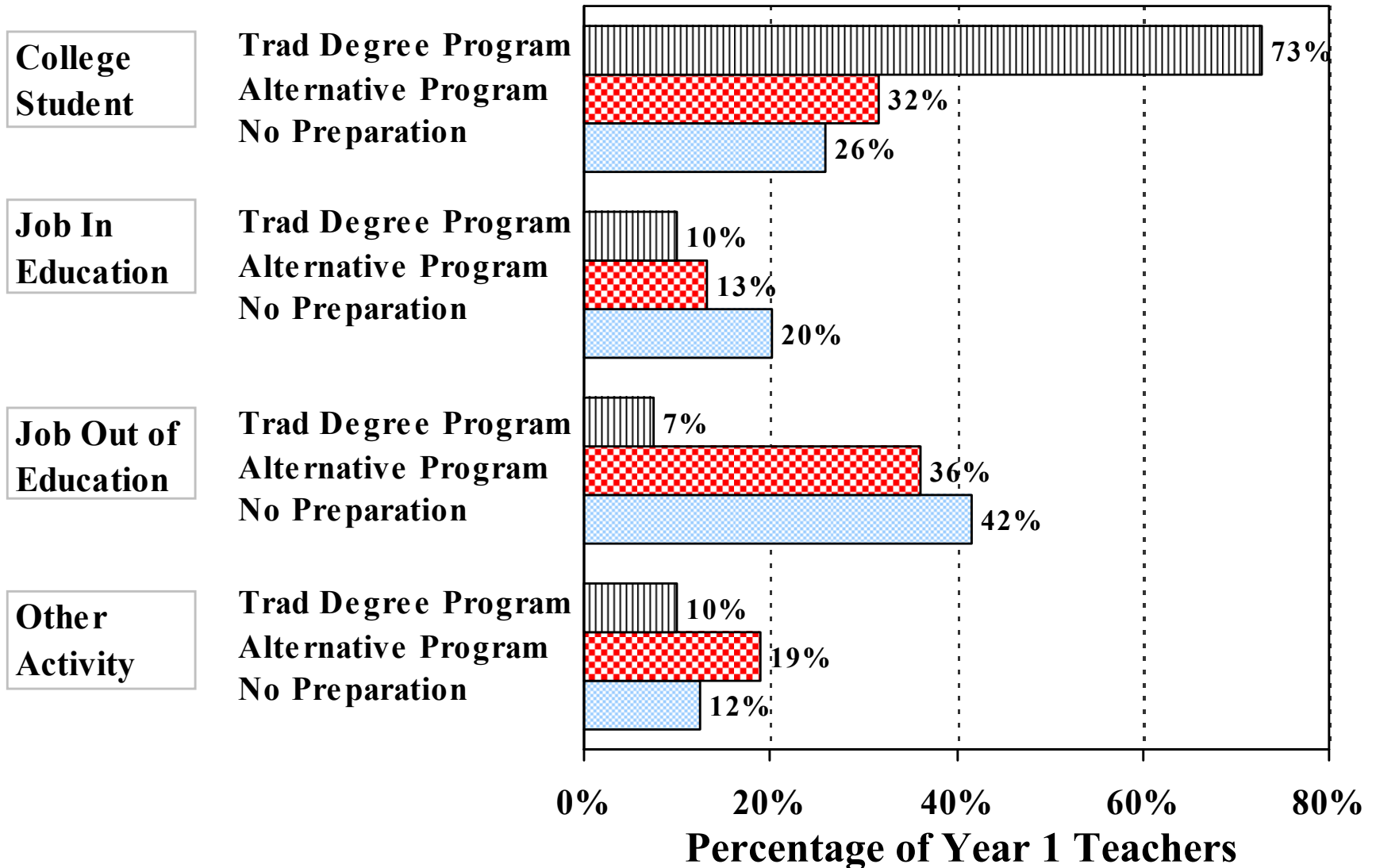
- ATP Programs enrolled a majority of first-year teachers age 30 or older (52%), whereas 19% were under 25.
- Except for bachelor's graduates from TTP Programs, ATP Programs did not enroll first-year teachers who were older than first-year teachers from other types of preparation.
- Therefore, ATP Programs have not been particularly effective in recruiting mature individuals into teaching, nor have they avoided recruiting younger individuals.

# EIGHTH RESEARCH QUESTION

---

- To what extent did ATP Programs enroll first-year teachers who were recently employed in non-education vocations?

# Activity during the year before entering teaching: Percent of first-year public teachers



Source: 2003-04 SASS, NCES

# Conclusions to Eighth Question

---

- ATP Programs enrolled a minority of first-year teachers who were career-switchers from other fields (36%), whereas 32% were recent college graduates.
- About as many first-year teachers without preparation were career-switchers from other fields (42%) as were first-year teachers recruited by ATP Programs (36%).
- Therefore, ATP Programs have not been particularly effective in recruiting career-switchers from other fields, nor avoiding recruitment of recent college graduates.

# NINTH RESEARCH QUESTION

---

- To what extent did ATP enroll beginning teachers who had earned degree majors in fields of study other than education?

## Percent of beginning public school teachers (1 – 3 years experience) with an education degree at the bachelor's and/or master's level (03-04)

Beginning Public School Teachers Instructional Level	Percentages of Beginning Teachers with Education Degrees before Entering Teaching				No Prep
	Traditional		Alternative		
	Degree	Other	Program	Other	
<b>A. Elementary</b>					
General Education	91 %	70 %	37 %	81 %	51 % <sup>b</sup>
Special Education	89 %	--- <sup>a</sup>	50 % <sup>b</sup>	--- <sup>a</sup>	--- <sup>a</sup>
<b>B. Middle / Secondary</b>					
Core Academic Areas	81 %	46 %	28 %	44 %	26 %
Other Areas	82 %	53 %	22 %	40 %	28 %
<b>Total Beginning Teachers</b>	<b>86 %</b>	<b>57 %</b>	<b>31 %</b>	<b>57 %</b>	<b>31 %</b>

<sup>a</sup> Sample less than 15

<sup>b</sup> Sample 15 - 30

# Beginning Special Education Teacher Supply by Degree Major Field (with 1-3 Years of Experience)

## Traditional Degree Programs

Special Education Major

General Education Major

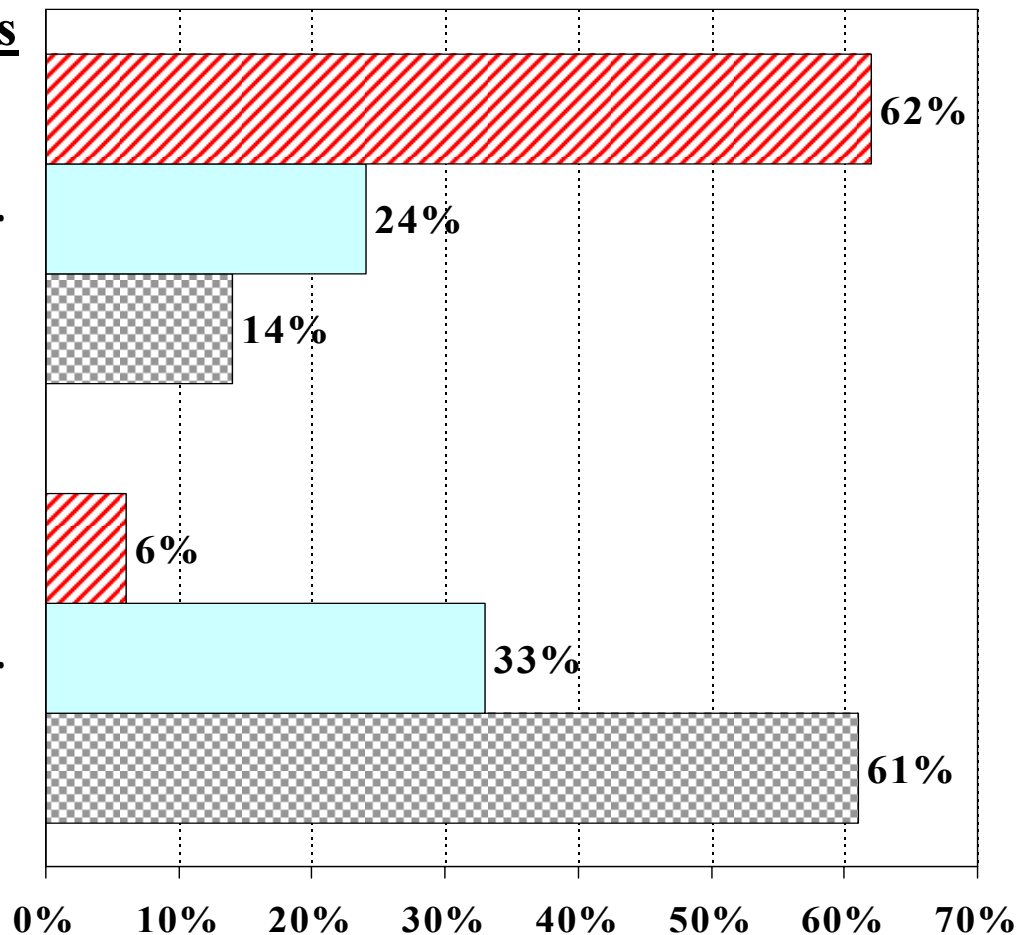
Other Major

## Alternative Programs

Special Education Major

General Education Major

Other Major



**Percent Beginning SETs within Program Type**

# Conclusions to Ninth Question

---

- 50% of beginning SETs and 37% of beginning GETs produced by ATP Programs at the elementary level earned an education degree before entering teaching.
- Overall, a substantial percent of beginning teachers produced by ATP Programs (31%) and other alternative (57%) earned an education degree before entering teaching.
- Therefore, ATP has been successful in producing 67% of its recruits from fields other than education, but was unable to avoid diverting 33% of its recruits from TTP.

# TENTH RESEARCH QUESTION

---

To what extent did TTP and ATP Programs produce beginning teachers who were highly qualified by NCLB standards?

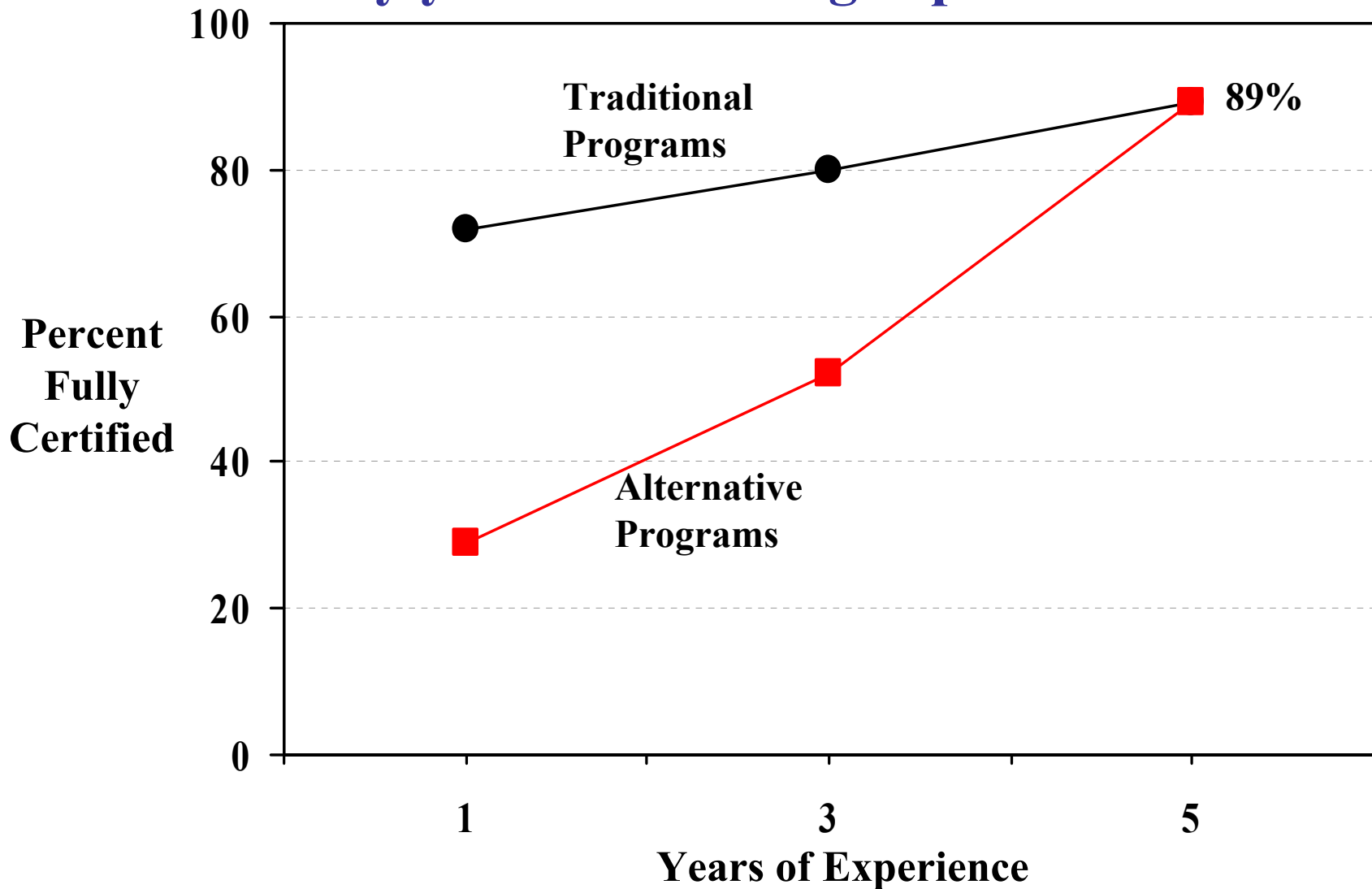
- \* Earned at least a bachelor's degree
- \* Were fully certified
- \* Demonstrated content knowledge

## Percent of beginning public school teachers (years 1 – 3) by highest degree earned before entering teaching (2003-04)

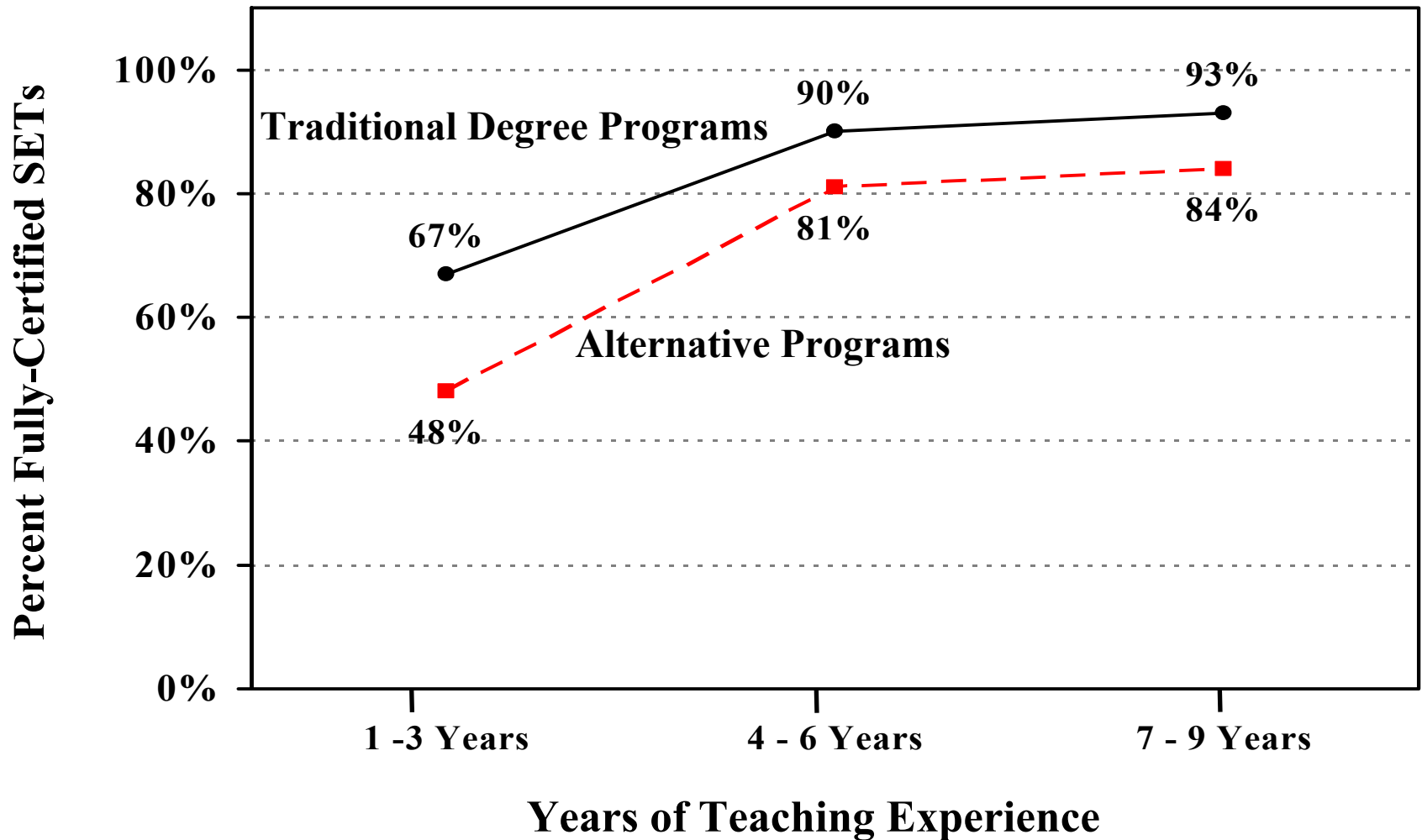
Type of Teacher Preparation		Beginning Public School Teachers by Degree Level		
		Below Bachelor's	Bachelor's Only	Above Bachelor's
		← <u>ROW PERCENTS</u> →		
<b>Traditional</b>	<b>1. Degree Program</b>	1 %	75 %	24 %
	<b>2. Other Traditional</b>	0 % <sup>a</sup>	81%	19 %
<b>Alternative</b>	<b>1. Alternative Program</b>	3 %	78 %	19 %
	<b>2. Other Alternative</b>	6 %	76 %	18 %
<b>None</b>	<b>No Preparation</b>	6 %	73 %	21 %

<sup>a</sup> Sample less than 30

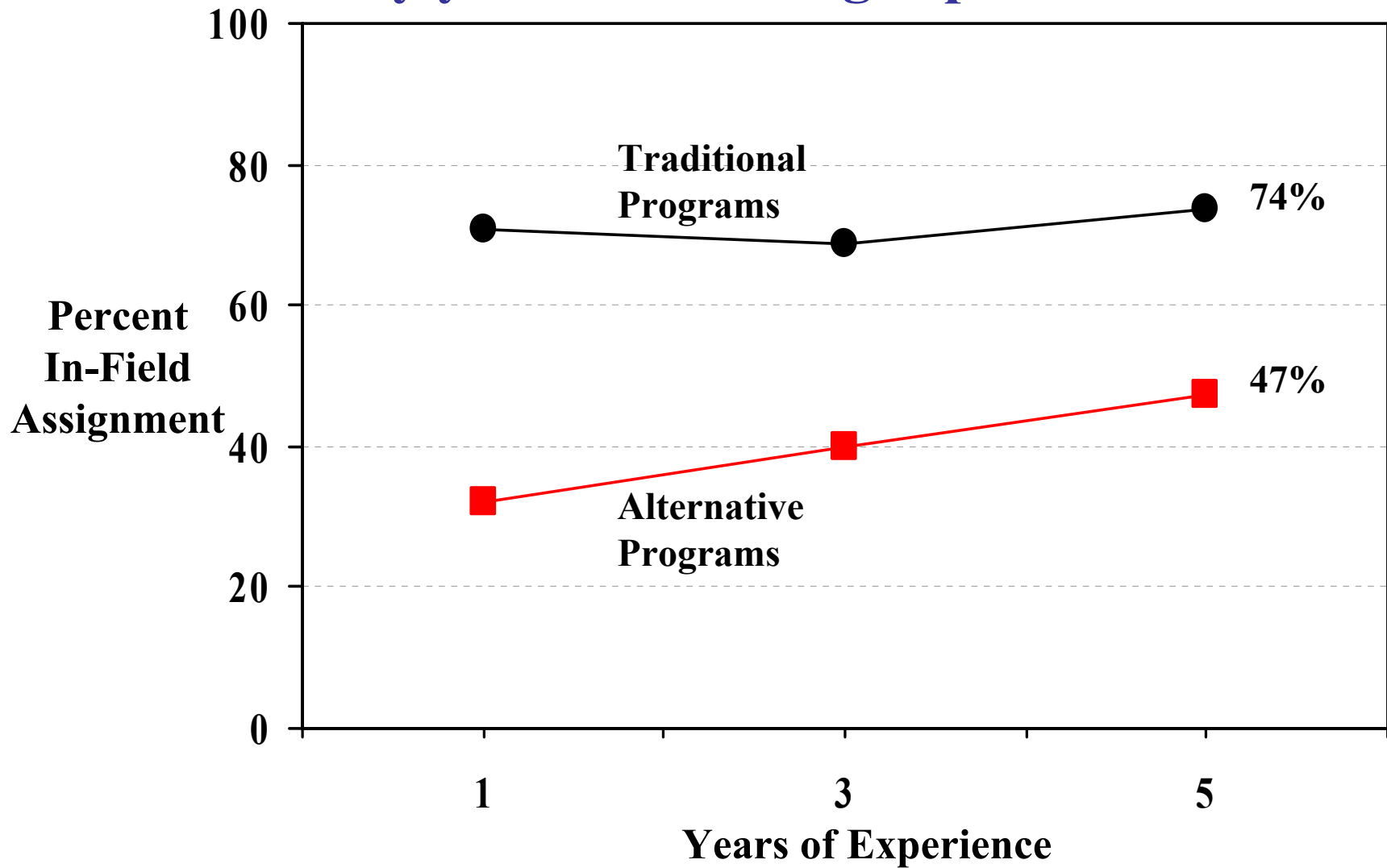
# Fully-certified public school teachers By years of teaching experience



# Fully-Certified Special Education Teachers By Years of Teaching Experience



# Percent of in-field public school teachers By years of teaching experience



# Conclusions to Tenth Question

---

- Beginning teachers from ATP Programs were less qualified than those from TTP Programs:
  - More failing to earn at least a bachelor's degree
  - Fewer qualifying for full certification
  - Fewer teaching in their field of content expertise
  - Fewer teaching methods courses completed
  - Less weeks of practice teaching completed

# ELEVENTH RESEARCH QUESTION

---

To what extent did TTP and ATP produce beginning teachers who were hired to teach in three shortage areas?

- \* Special education
- \* Mathematics education
- \* Science education

# Percent of beginning public school teachers by teaching area: 2003-04 (with 1-3 years of experience)

## Column Percents (%) of Beginning Teachers

Teaching Area	Demand: Total Force	Column Percents (%) of Beginning Teachers					
		Total	Traditional		Alternative		No Prep
	Degree Program		Other	Alternative Program	Other		
English	11 %	11 %	11 %	16 %	10 %	11 %	12 %
Mathematics	8 %	9 %	9 %	9 %	11 %	6 %	13 %
Science	7 %	7 %	5 %	7 %	9 %	9 %	14 %
Social Science	6 %	6 %	6 %	5 %	6 %	6 %	-- <sup>a</sup>
Arts/Music	7 %	6 %	6 %	-- <sup>a</sup>	3 %	6 %	5 %
Foreign Lang.	3 %	3 %	3 %	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>
Physical Ed	5 %	4 %	4 %	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>
Bilingual ESL	1 %	2 %	1 %	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>
Voc/Business Ed	5 %	5 %	4 %	-- <sup>a</sup>	9 %	9 %	12 %
Other Gen Ed.	1 %	1 %	1 %	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>	-- <sup>a</sup>
Elementary Ed.	33 %	32 %	36 %	35%	22 %	28 %	14 %
Special Ed.	13 %	14 %	14 %	7 %	20 %	12 %	14 %

<sup>a</sup> Sample well less than 30

# Conclusions to Eleventh Question

---

- ATP Programs produced a higher proportion of teachers for SpEd and VocEd than did TTP Programs, thereby responding strongly to the shortage of SETs.
- ATP and TTP Programs produced an equivalent proportion of teachers for math and science ed; thereby not responding strongly to shortages in these areas.
- ATP programs produced a lower proportion of teachers for ElemEd and Arts/Music Ed than did TTP programs, thereby responding strongly to surpluses in these areas.

# OVERALL CONCLUSIONS

---

- ATP Programs have been developed to a level that they are a major source of beginning teachers in public schools (up to 15%, or 23,000 annually).
- Beginning teachers from ATP Programs are less well prepared and qualified than those from TTP Programs.
- ATP Programs have fallen short of realizing their main objectives of recruiting mature career-switchers from non-education positions and without education degrees.
- ATP Programs have responded to the shortage of SETs.