



Illinois Education Research Council

Pipelines and pools: Meeting the demand for early childhood teachers in Illinois

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The Purpose of the Study

Is the *supply* of qualified early childhood teachers adequate to meet *demand*?

Supply $\stackrel{?}{=}$ Demand



Supply and Demand

- **Supply**
 - Pipeline of newly certified teachers
 - Reserve Pool of previous certificants
 - Illinois has pre-existing early childhood certification, so we have built up a cadre of qualified teachers
- **Demand**
 - Expected increase in the need for certified early childhood teachers





The New Certificant Pipeline

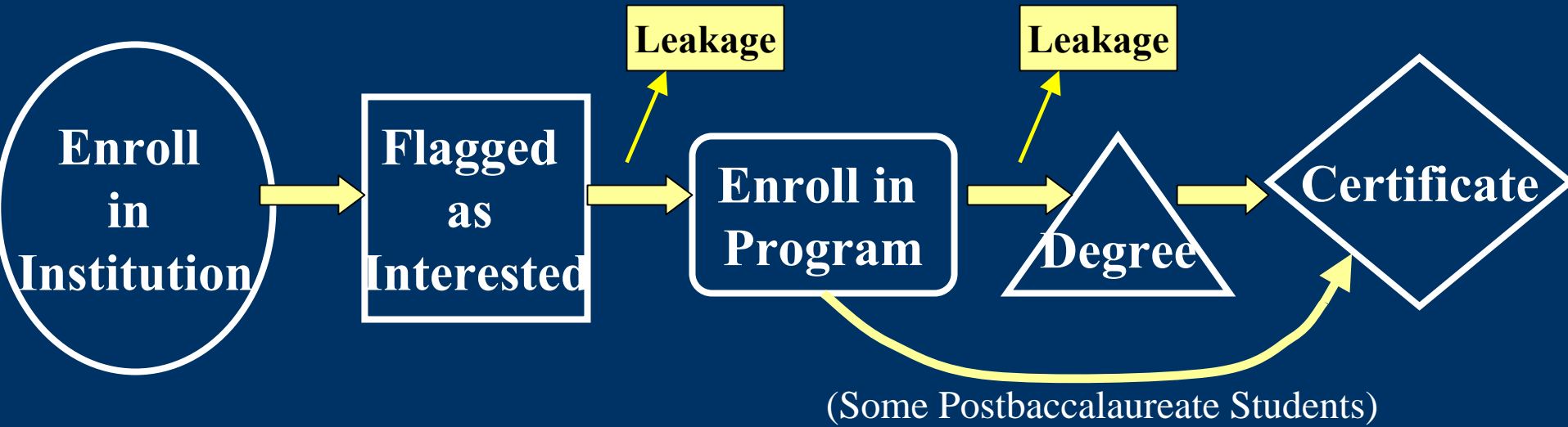
Illinois Yearly

Average

• Enrollment		
– 1998-2005 IPEDS.....	2,678	
• Chicago.....	1,400	
• Degrees		
– 1998-2005 IPEDS.....	615	} Used in models of supply & demand
– 2001-2003 IPEDS.....	625	
• Certificates		
– 2001-2003 TCIS.....	540	
– 2001-2003 ISBE.....	775	
• 2005 ISBE.....	1,042	



The higher education pipeline is robust, but leaky.



There is not only “leakage” between enrollment and completion, but also between “interest” and enrollment.



Key Findings about the Pipeline

- Illinois has a large number of enrollees (over 2,600) in early childhood programs. However, there is “leakage” in the pipeline from the “interest” to the program-enrollment stage, as well as from enrollment to completion.
- On average, 620 degrees and 775 certificates are awarded annually.
- The number of new certificants has increased in the past two years, with more than 1,000 in 2005. If this trend continues, it bodes well for meeting the increasing need for early childhood teachers.



Reserve Pool of Previous Certificants

- Survey: Examine characteristics of potential reserve pool and conditions under which they might work in an Illinois early childhood center
- Working assumption: Expanded preschool access would likely come through early childhood centers and these centers are harder to staff than public schools
- Although our survey was specific to childhood centers, it is probable that the overall findings can be generalized to public schools.





Methodology

- We used the TCIS and TSR through 2002-2003 to identify those who held an **Illinois Early Childhood Teaching Certificate** between 1989 – 2003 *and* were **not working in Illinois public schools in the 2002–2003 academic year** —the potential reserve pool (N=5,402).
- We surveyed a random sample of 4,000 individuals from the potential reserve pool between January and May, 2005.
- 1,664 usable surveys were returned for a 46% response rate.
- Unbiased response patterns allow us to generalize to the potential reserve pool. Figures are based on the weighted results.





Identifying the Reserve Pool

- **Excluded those who are currently working in an Illinois early childhood center (N=558).**
- **Excluded those who are retired or disabled (N=743).**
- **Excluded those who were NOT willing to consider working in an Illinois early childhood center under any conditions (N=698).**

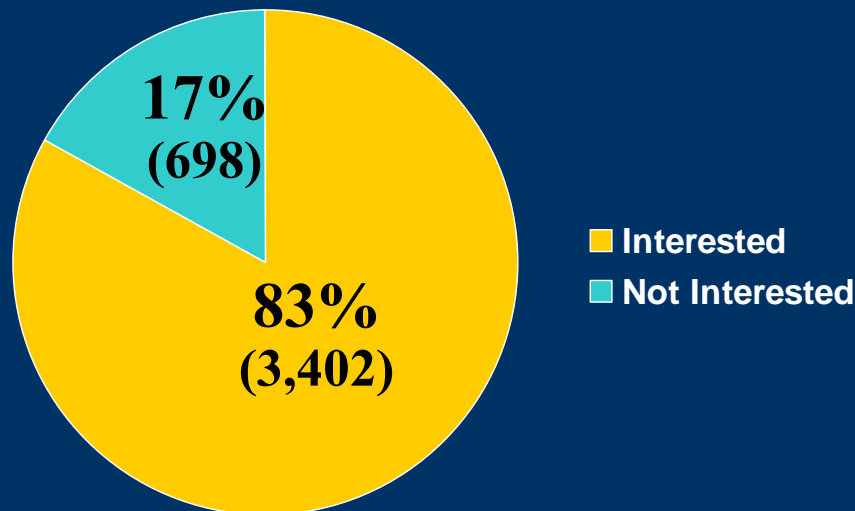




There is a Reserve Pool

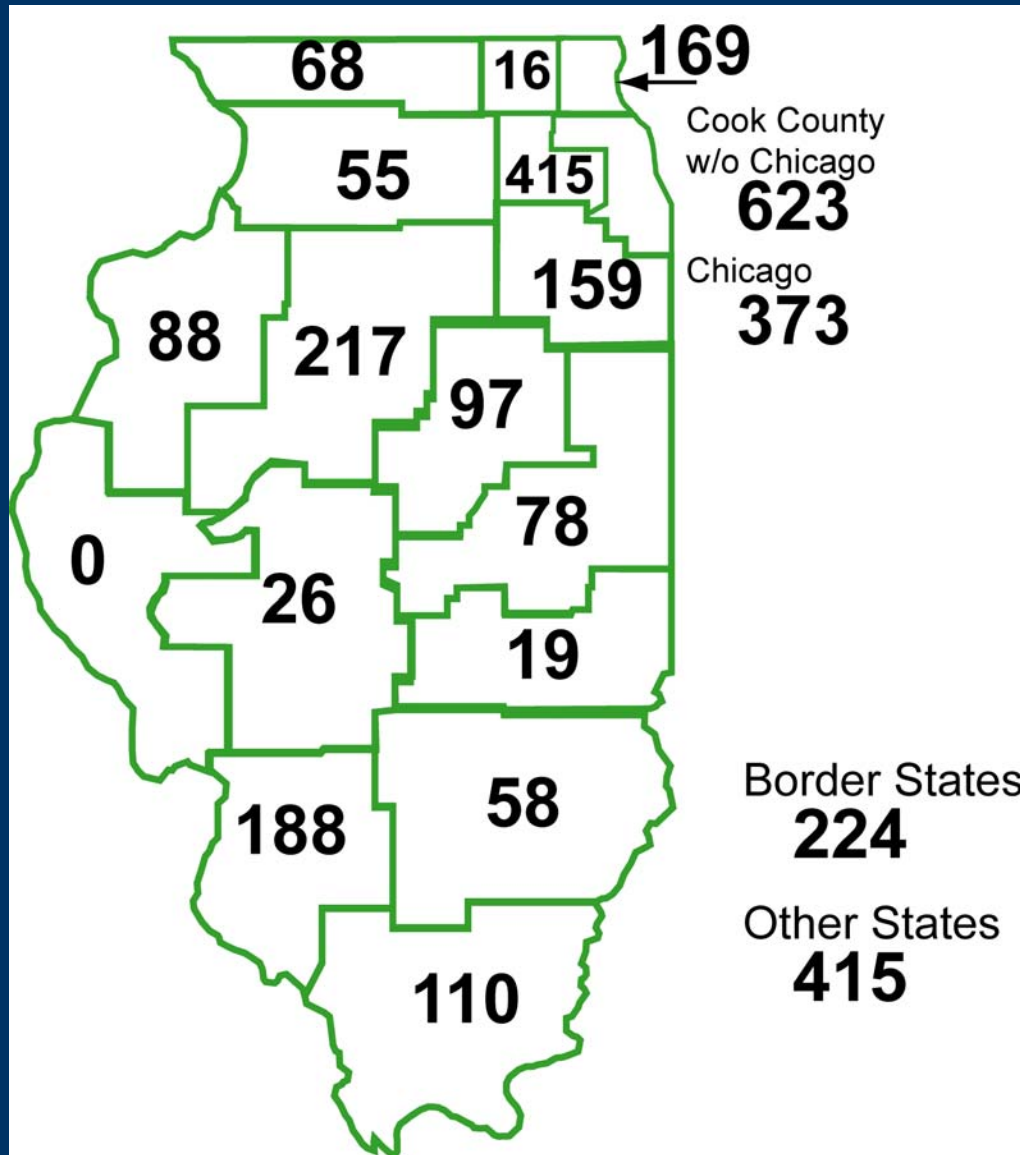
N=3,402

- Type 04 certified, not working in IPS in '02-'03, and indicated a willingness to work in an Illinois early childhood center under the right conditions.
- This represents **83%** of those potentially available (early childhood certificants who are not retired and not already working in an Illinois early childhood center).





Current Distribution of the Reserve Pool



N=3,402



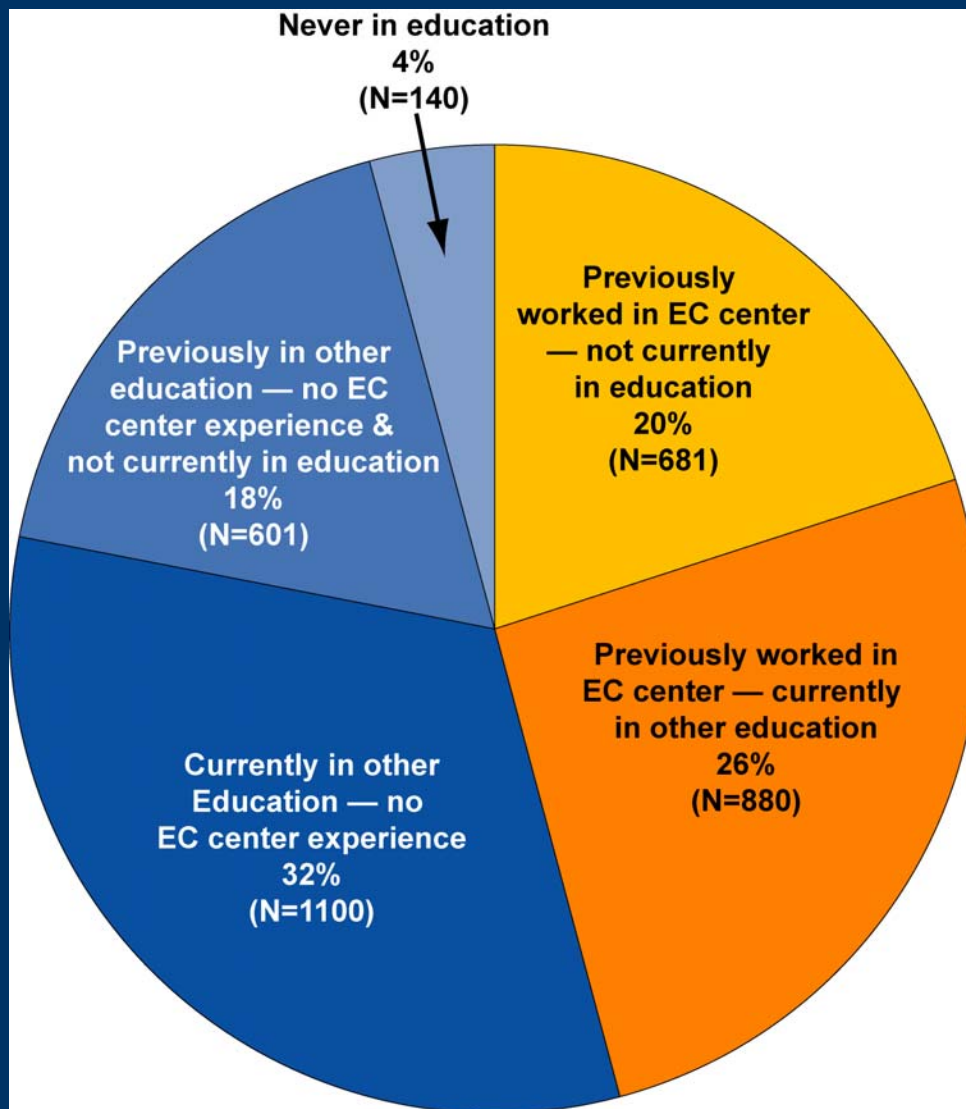
Demographic Characteristics of the Reserve Pool

Demographic Characteristics	Reserve Pool	Chicago
	100% (N=3,402)	11.0% (N=373)
Age		
33 yrs and younger	31%	34%
34-40 yrs old	29%	15%
41-54 yrs old	28%	24%
55 yrs and older	12%	28%
Race/Ethnicity		
White	93%	67%
Black	5%	22%
Latino/Hispanic	2%	8%
Highest Degree		
Master's or above	38%	51%





Nearly Half (46%) the Reserve Pool have Previously Worked in an Early Childhood Center Since Certification



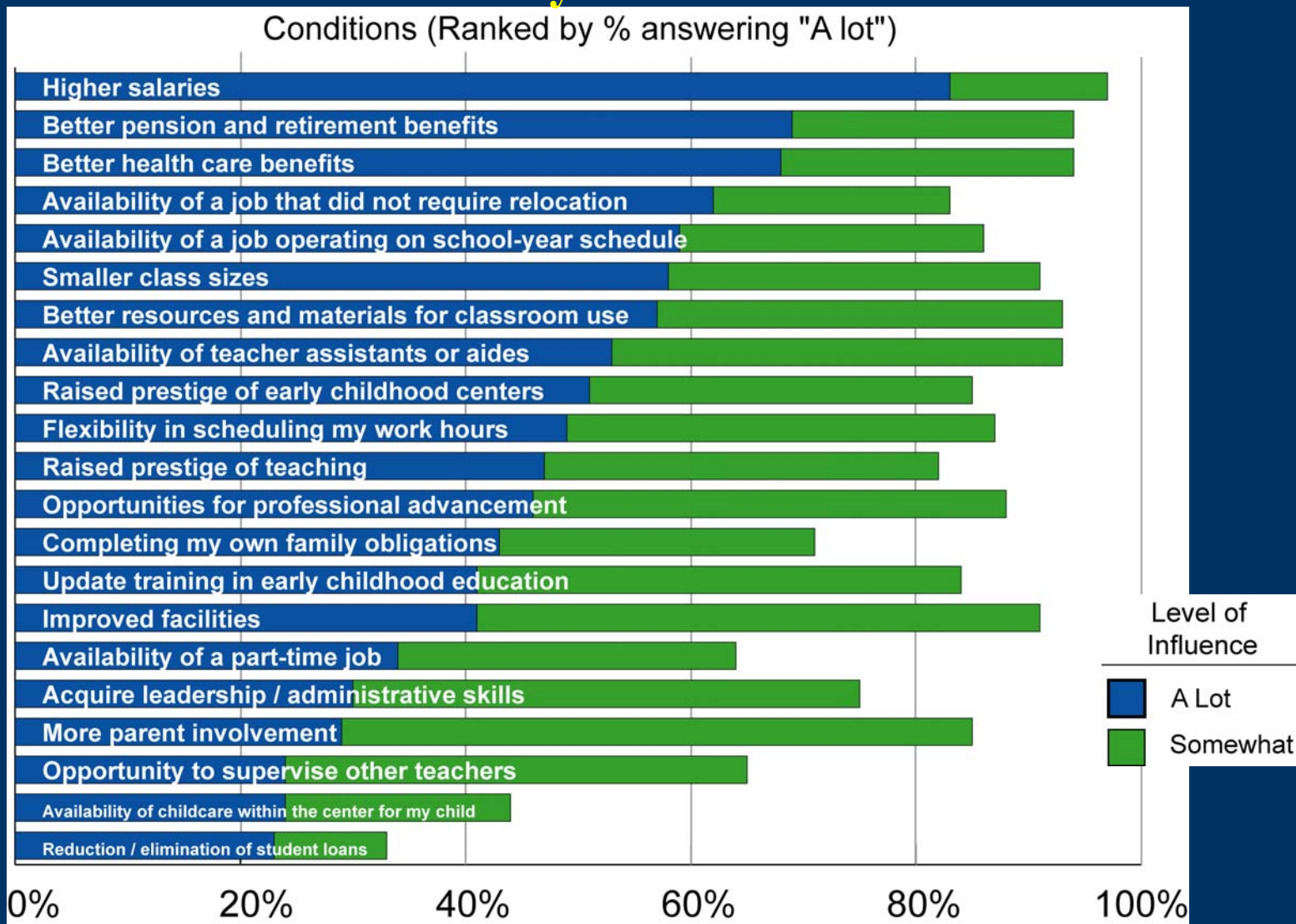
N=3,402

Note: Those currently working in an early childhood center are excluded from the Reserve Pool.

Note: Totals may not add to 100% due to rounding.



Many Conditions Would Positively Influence the Reserve Pool's Decisions to Work in an Illinois Early Childhood Center



N=3,402



Higher salaries trump all other influences when the Reserve Pool chooses their top three conditions.

Conditions	% Placing Condition in Top Three
Higher salaries	72%
Availability of a job operating on school-year schedule	23%
Better health care benefits	22%
Flexibility in scheduling my work hours	21%
Completing my own family obligations	20%
Better pension and retirement benefits	19%
Smaller class sizes	18%
Better resources and materials for classroom use	14%
Availability of a part-time job	11%
All other conditions	<10%





Almost half (45%) of the Reserve Pool would require less than \$40,000 and another 29% would require \$40-\$49,999.

Annual Salary Requirement	Percent
\$20,000 - \$29,999	7%
\$30,000 - \$39,999	38%
\$40,000 - \$49,999	29%
\$50,000 - \$59,999	14%
\$60,000 - \$69,999	7%
\$70,000 or more	4%
Total	100%

N=3,402



Annual Salary Requirements by Region

Annual Salary Range	Chicago N=351	Cook County (minus Chicago) N=584	Northeast (minus Cook County) N=737	Northwest N=412	Central N=214	South N=344	Out of State N=601
\$20,000 to \$29,999	—	—	7%	14%	18%	13%	3%
\$30,000 to \$39,999	19%	32%	37%	53%	44%	54%	35%
\$40,000 to \$49,999	38%	39%	33%	21%	24%	21%	24%
\$50,000 to \$59,999	13%	20%	15%	8%	12%	—	20%
\$60,000 to \$69,999	17%	5%	5%	—	—	—	14%
\$70,000 or more	8%	3%	4%	—	—	—	5%

— N < 18



Salary Requirements Are Related to Age

Annual Salary Range	33 Years and Younger	34 to 40 Years Old	41 to 54 Years Old	55 Years and Older
Distribution by Age	31%	29%	28%	12%
\$20,000 to \$ 29,999	10%	8%	3%	7%
\$30,000 to \$ 39,999	52%	39%	28%	21%
\$40,000 to \$ 49,999	25%	28%	35%	28%
\$50,000 to \$ 59,999	8%	15%	19%	19%
\$60,000 to \$ 69,999	3%	7%	10%	15%
\$70,000 or more	2%	3%	5%	8%
Total	100%	100%	100%	100%

N=3,402

Note: Totals may not add to 100% due to rounding.



Most of the Reserve Pool Would Stay Employed in an Illinois Early Childhood Center for an Extended Period

Anticipated Length of Employment	33 Years and Younger	34 to 40 Years Old	41 to 54 Years Old	55 Years and Older	Total
Distribution by Age	31%	29%	28%	12%	
Less than 1 year	<1%	<1%	0%	0%	0%
1 to 3 years	23%	16%	11%	26%	18%
4 to 10 years	40%	48%	49%	67%	48%
More than 10 years	38%	35%	39%	7%	34%
Total	100%	100%	100%	100%	100%

N=3,402

Note: Totals may not add to 100% due to rounding.



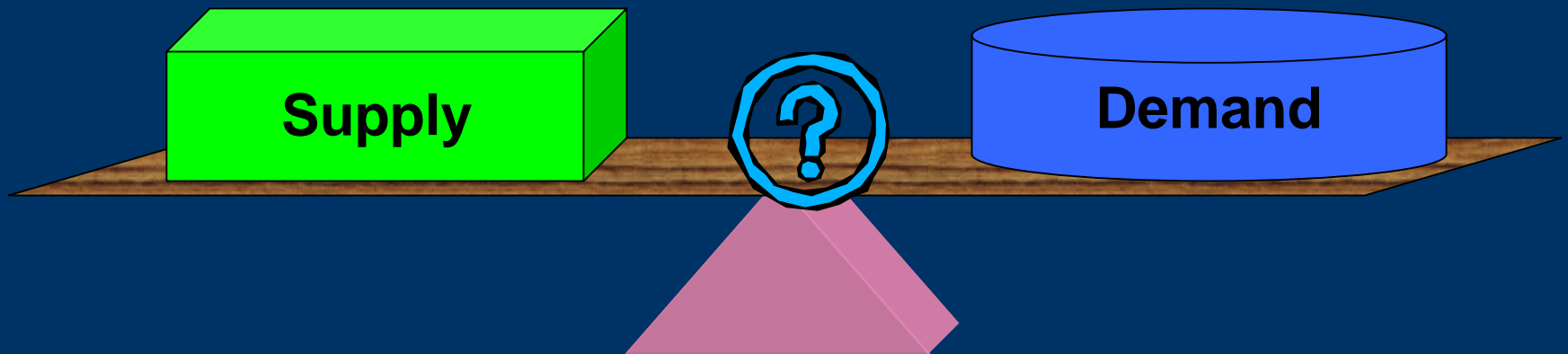
Key Findings about the Reserve Pool

- There are about **3,400** certificants who would be willing to consider working in an Illinois early childhood center under certain conditions – this represents **83%** of those available.
- We identified many conditions that would influence their decisions, but **salary trumps everything else.**
 - **45%** would require less than \$40,000 FT/FY
 - **An additional 29%** would work for \$40,000 - \$49,999
 - **Salary requirements are higher in Chicago**
- Thus, it is **salary not setting** that makes it hard to recruit teachers to early childhood centers.





Will Supply Meet Demand?





Modeling Supply & Demand

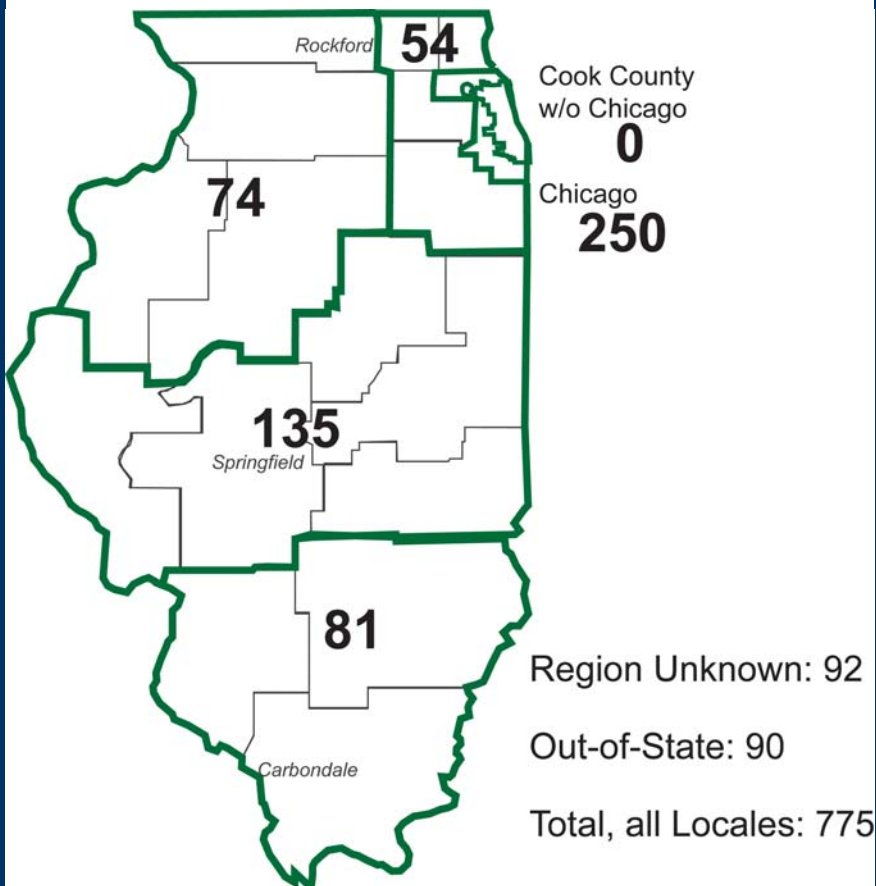
- Phase 1 of Preschool for All: 32,000 additional children in Years 1 through 3
- Phase 2 of Preschool for All: extending service to “all” in Years 4 & 5
 - 50% of 3-year olds and 60% of 4-year olds = 23,000 additional children
- Assumptions:
 - 20 students per teacher for half day
 - 37% of growth in Chicago
 - Regional labor markets
- For modeling purposes, we tapped the Reserve Pool first, then the Pipeline – in reality these can be simultaneous



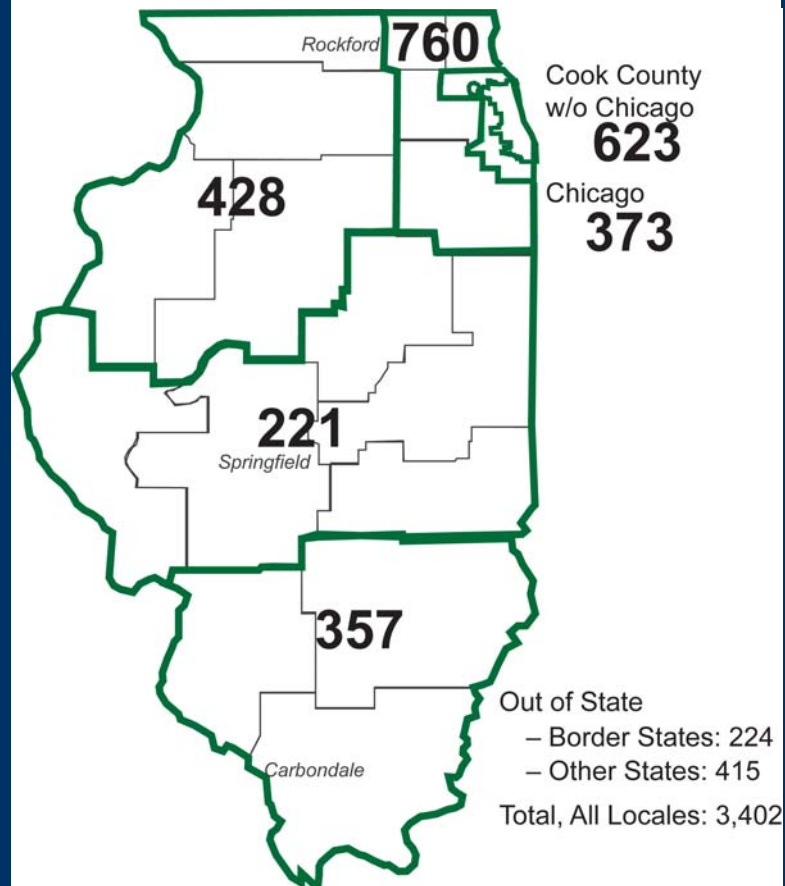


Distribution of New Certificant Pipeline and Reserve Pool

Pipeline



Pool





Our Estimates are Conservative

- The models draw on 25% of the Reserve Pool in each phase of the early childhood expansion.
- The models do not include any supply from out-of-state or unknown regions.
- The pipeline is likely underestimated, since we use a multi-year average and production has increased in recent years.
- The models do not include any qualified teachers currently in early childhood centers – we assume all are already assigned to ECBG classrooms.
- We assume that nobody will move out of their current region to work.





Modeling Phase 1

Region	Additional Children Served Over 3 Years	Additional Type 04 Teachers Needed Over 3 Years	# Teachers if 25% of Regional Reserve Pool is Recruited Over 3 Years	Annual Deficit or Surplus with 25% of Regional Reserve Pool	Expected Number of New Certificants per Year	Annual Proportion of New Certificants Needed
City of Chicago	11,840	296	93	-68	250	27%
Cook County (minus City)	5,227	131	156	8	0	—
Northeast (minus Cook Co.)	7,120	178	190	4	54	—
Northwest	2,987	75	107	11	74	—
Central	2,560	64	55	-3	135	2%
South	2,267	57	89	11	81	—
Total, Illinois	32,000	800	690	-37	593	6%
Region Unknown					92	<i>None used in model</i>
Out-of-State			160		90	
Total, all Locales	32,000		850		775	



Modeling Phase 2

Region	Additional Children Served Over 2 Years	Additional Type 04 Teachers Needed Over 2 Years	# Teachers if 25% of Regional Reserve Pool is Recruited Over 2 Years (minus Phase 1)	Annual Deficit or Surplus with 25% of Regional Reserve Pool	Expected Number of New Certificants per Year	Annual Proportion of New Certificants Needed
City of Chicago	8,510	212	70	-72	250	29%
Cook County (minus City)	3,757	94	117	12	0	—
Northeast (minus Cook Co.)	5,118	128	143	8	54	—
Northwest	2,147	54	80	14	74	—
Central	1,840	46	41	-3	135	2%
South	1,629	41	67	13	81	—
Total, Illinois	23,000	575	518	-29	593	5%
Region Unknown					92	<i>None used in Model</i>
Out-of-State			160		90	
Total, all Locales	23,000		678		775	



Key Findings from Supply & Demand Study

- Reserve Pool members are willing to work in early childhood centers **under certain conditions** and provide a ready source of qualified teachers.
- Illinois early childhood centers need to offer certified teachers **salaries** that recognize their professional training and education.
- **Chicago** will be more reliant on the pipeline than other regions.
 - More work is needed to determine why more students aren't progressing from "interest" to program enrollee to graduate in Chicago higher education institutions.





Conclusions

- Through a combination of the Reserve Pool and the new certificant pipeline, Illinois will be able to meet the demand for additional early childhood teachers if:
 - 1) *Preschool for All* adds about **10,000** 3- and 4-year olds per year, *and*;
 - 2) Early childhood centers can offer professional **salaries** to certified teachers.

