



# *Illinois Education Research Council*

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

**Brenda K. Klostermann**

**Bradford R. White**

**Jennifer B. Presley**

**Funding for this study was provided by the National Institute for Early Education Research (NIEER) at Rutgers University and The Pew Charitable Trusts.**





# 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

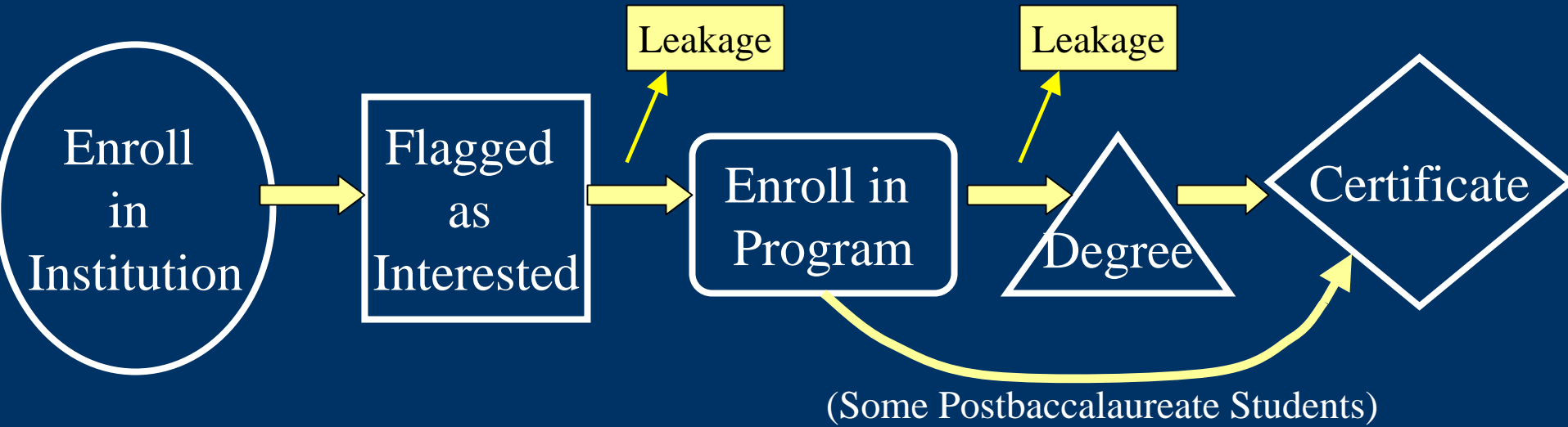
- Enrollment
  - 1998-2005 IPEDS..... 2,678
    - Chicago.....1,400
- Degrees
  - 1998-2005 IPEDS..... **615**
  - 2001-2003 IPEDS..... **625**
- Certificates
  - 2001-2003 TCIS..... **540**
  - 2001-2003 ISBE.....775
    - 2005 ISBE.....1,042

Used in  
models of  
supply &  
demand





# 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.





# Identifying the Reserve Pool

- 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)**.
- Surveyed random sample of 4,000 in Spring 2005; 46% response rate.
- **Selecting 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).





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

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.**

<b>Annual Salary Requirement</b>	<b>Percent</b>
\$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%
<b>Total</b>	<b>100%</b>

N=3,402



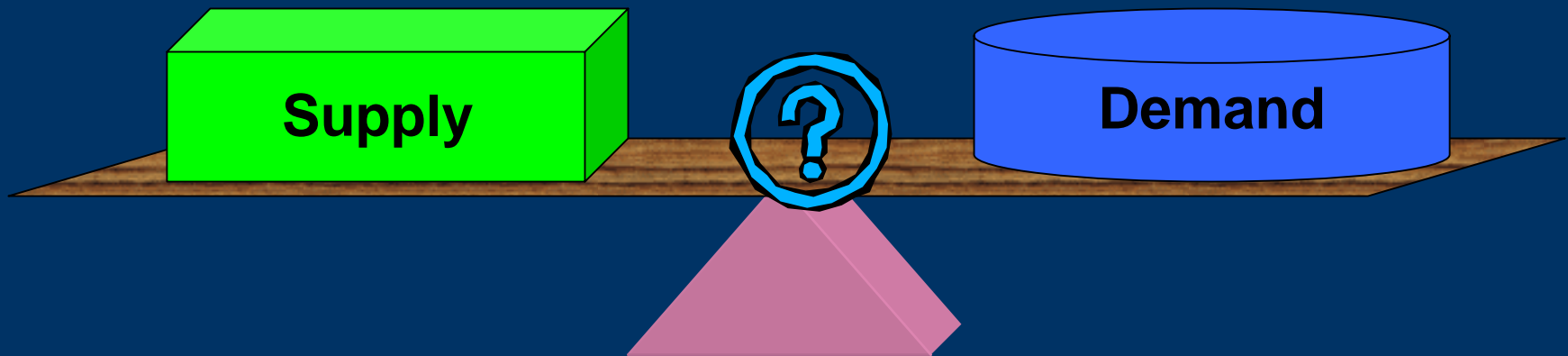
# Key Findings about the Reserve Pool

- There are about **3,400** certificants who would be willing to work 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
- Thus, it is **salary not setting** that makes it hard to recruit teachers to early childhood centers.

**There is a ready and potentially willing Reserve Pool of qualified teachers for Illinois early childhood centers.**



# Will Supply Meet Demand?





# Modeling Supply & Demand

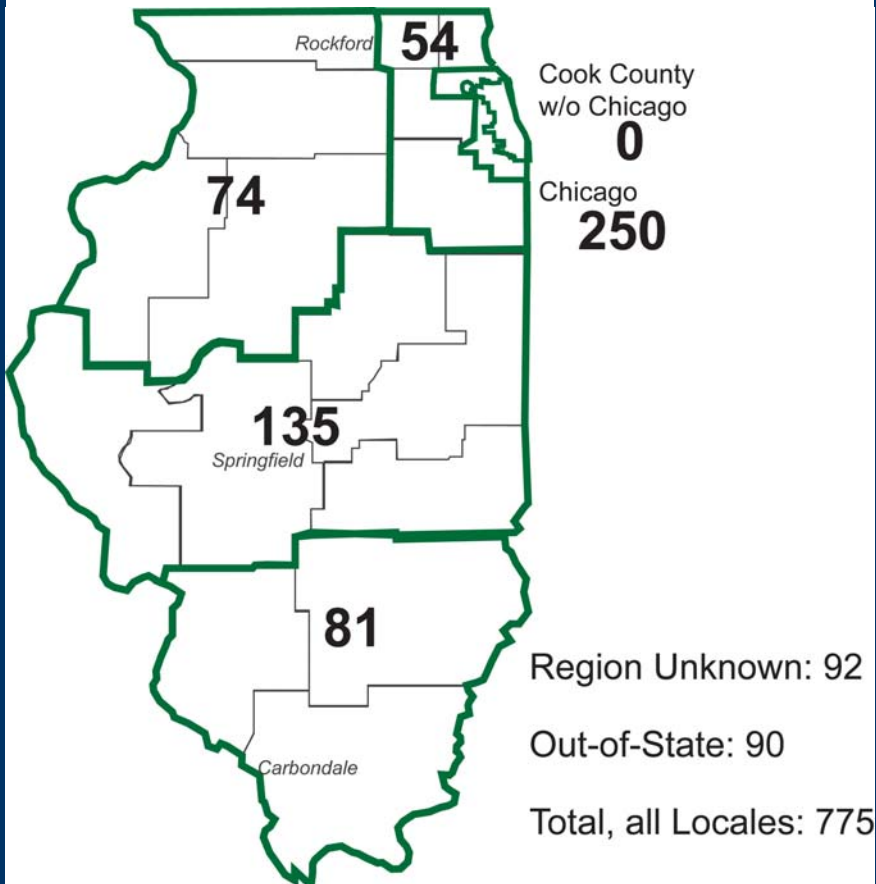
- Phase 1 of Preschool for All: 32,000 additional children in Years 1 through 3
- Phase 2 of Preschool for All: extending service to “all” in Years 4 & 5
  - 50% of 3-year olds and 60% of 4-year olds = 23,000 additional children
- Assumptions:
  - 20 students per teacher for half day
  - 37% of growth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



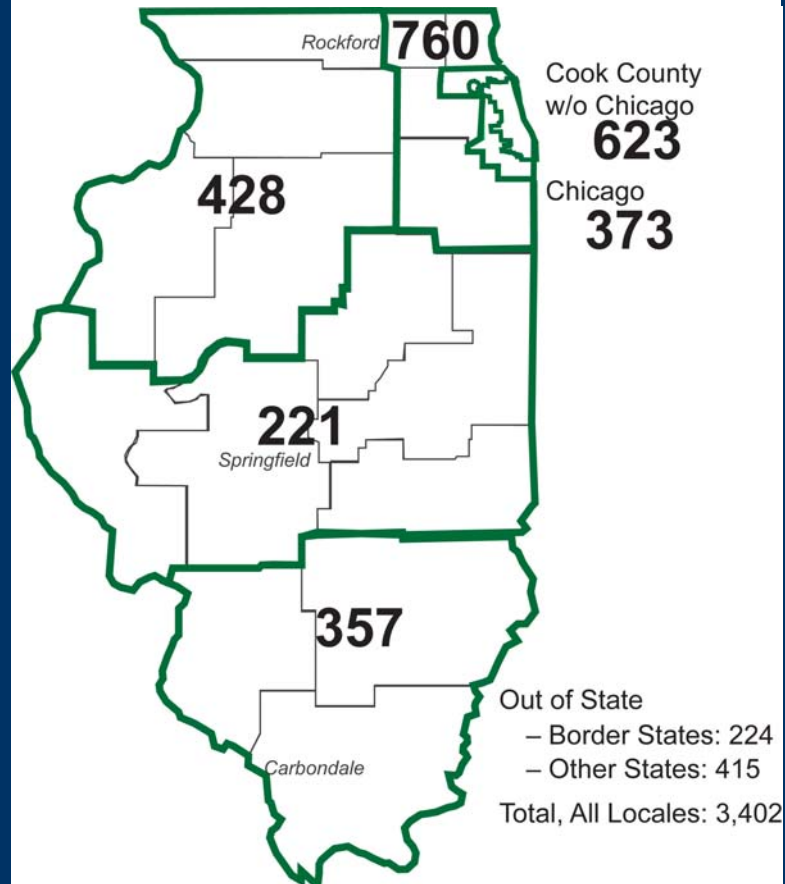


# Distribution of New Certificant Pipeline and Reserve Pool

## 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 are only looking at those willing to consider working in early childhood centers (we did not ask about public schools).
- 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	—
<b>Total, Illinois</b>	<b>32,000</b>	<b>800</b>	<b>690</b>	<b>-37</b>	<b>593</b>	<b>6%</b>
Region Unknown					92	<i>None used in model</i>
Out-of-State			160		90	
<b>Total, all Locales</b>	<b>32,000</b>		<b>850</b>		<b>775</b>	



# 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	—
<b>Total, Illinois</b>	<b>23,000</b>	<b>575</b>	<b>518</b>	<b>-29</b>	<b>593</b>	<b>5%</b>
Region Unknown					92	<i>None used in Model</i>
Out-of-State			160		90	
<b>Total, all Locales</b>	<b>23,000</b>		<b>678</b>		<b>775</b>	





# 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.





# 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.

