Rochester Early Childhood Assessment Partnership (RECAP)

Promoting Informed Decisions for Early Childhood

2007-08 RECAP Annual Report & Technical Summary are available at: www.childrensinstitute.net
What is RECAP?

Comprehensive integrated data and professional development system that develops and supports high-quality practices with its primary focus on early education.

Who is involved with RECAP?
Educators, administrators, evaluators, psychologists, policymakers, economists, trainers.
The Basic RECAP Model

- Family
- Pre-K Child Outcomes
- Child Outcomes
- Program
- Family Variables
- Kindergarten Child Outcomes
- First Grade Child Outcomes
Vision and Mission

Beginning in the greater Rochester area, RECAP provides accurate, reliable and valid information that is used by the early childhood community for making informed decisions that improve programs, practices and outcomes. RECAP is non-partisan and takes no position regarding policy (2001).
RECAP and Rochester’s
Early Childhood Community

- About 66% of Rochester’s four-year-olds since 1999
- Rochester City School District and community-based organizations
- All Universal Pre-K Programs
- Criteria and screening of all UPK applications
- Ongoing training and consultation
Financial Support

- Rochester Area Community Foundation
- Monroe County Department of Human Services
- Rochester City School District
- Rochester's Child, a program of the Rochester Area Community Foundation Initiatives
- New York State Department of Education
- United Way of Greater Rochester
- Providers
Program Activities

Each year, RECAP provides important program activities, such as:

- Professional development and teacher training on the use of child-assessment questionnaires and interpretation of results
- Efficient and user-friendly data collection and feedback reports, with reports looped back to teachers and directors
- Observer training on fidelity implementation of the Early Childhood Environmental Rating Scale (ECERS-R) and Early Language and Literacy Classroom Observation (ELLCO)
- Biweekly RECAP review and planning meetings (The “A Team”)
- Community presentations of RECAP results

These implementation efforts together integrate into a system that continuously strives to ensure and maintain quality Pre-K classrooms, and in turn, improve student performance and outcomes.
# Measures Collected and Numbers Assessed

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measures</th>
<th>Numbers assessed in 2007-2008</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom Environmental Quality</td>
<td>ECERS-R</td>
<td>106</td>
<td>Classroom Observation</td>
</tr>
<tr>
<td>Literacy Instruction</td>
<td>ELLCO</td>
<td>29</td>
<td>Classroom Observation</td>
</tr>
<tr>
<td>Academic, Motor and Social</td>
<td>Child Observation Record (COR)</td>
<td>1,876</td>
<td>Teacher Report</td>
</tr>
<tr>
<td>School, Emotional and Behavioral Adjustment</td>
<td>Teacher-Child Rating Scale (T-CRS)</td>
<td>1,912</td>
<td>Teacher Report</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>Family Involvement Questionnaire</td>
<td>742</td>
<td>Parent Survey</td>
</tr>
<tr>
<td>Parent Satisfaction</td>
<td>Early Childhood Parent Survey</td>
<td>731</td>
<td>Parent Survey</td>
</tr>
</tbody>
</table>
Systems–Participation Data

- 2,711 students
- 162 classrooms
- 40 program staff participated in orientation activities
- 57 Pre-K teachers trained in the COR
- 33 program staff trained in ECERS-R
- 47 program staff trained in ELLCO
- 29 ECERS-R master observers participated in refresher training
- 13 program staff attended reports interpretation workshops or individual sessions
- 26 program staff members and partners attended 2006-07 Annual Report Findings presentations
- 13 program staff participated in ECERS-R discussion groups
11th Annual RECAP Report

- Nine years of trend data
- Now more than 20,000 Pre-K students assessed
- Combination of established facts...
- ...Plus new and possibly significant findings
Outcome: Quality of the Classroom Environment
Reliability of the Measures

- RECAP takes great care and devotes considerable resources in ensuring the reliability and validity of the measures we report annually so we can compare our work to others nationally.

- The primary measures of the study (ECERS-R, T-CRS and COR) had excellent alpha-reliabilities ranging from 0.86 to 0.94.
Rochester’s Continued Excellence

2007-2008 RECAP Annual Report
IES Treatment Comparison to RECAP

(Score: 1=Inadequate, 3=Minimal, 5=Good, and 7=Excellent)
ECERS-R Score Trends

2007-08 RECAP Annual Report
9 Years of Overall ECERS-R Results
Means and 95% Upper and Lower Confidence Intervals by Year

Scores:
- Upper Bound
- Mean
- Lower Bound

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>120</td>
<td>116</td>
<td>118</td>
<td>128</td>
<td>137</td>
<td>129</td>
<td>128</td>
<td>127</td>
<td>127</td>
</tr>
<tr>
<td>Lower</td>
<td>5.3</td>
<td>5.7</td>
<td>5.9</td>
<td>6.1</td>
<td>5.8</td>
<td>5.7</td>
<td>5.9</td>
<td>5.8</td>
<td>6.0</td>
</tr>
<tr>
<td>Mean</td>
<td>5.5</td>
<td>5.9</td>
<td>6.1</td>
<td>6.2</td>
<td>6.0</td>
<td>5.8</td>
<td>6.0</td>
<td>5.9</td>
<td>6.1</td>
</tr>
<tr>
<td>Upper</td>
<td>5.7</td>
<td>6.1</td>
<td>6.3</td>
<td>6.3</td>
<td>6.2</td>
<td>5.9</td>
<td>6.1</td>
<td>6.1</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Scores: 1 = Inadequate, 3 = Minimal, 5 = Good, 7 = Excellent
<table>
<thead>
<tr>
<th>School Year</th>
<th>Space &amp; Furnishings</th>
<th>Personal Care Routines</th>
<th>Language-Reasoning</th>
<th>Activities</th>
<th>Interaction</th>
<th>Program Structure</th>
<th>Parents &amp; Staff</th>
<th>Total/Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-04 (n=137)</td>
<td>6.0</td>
<td>5.7</td>
<td>6.0</td>
<td>5.6</td>
<td>6.3</td>
<td>6.1</td>
<td>6.4</td>
<td>6.0</td>
</tr>
<tr>
<td>2004-05 (n=129)</td>
<td>5.7</td>
<td>5.4</td>
<td>5.9</td>
<td>5.4</td>
<td>6.3</td>
<td>5.8</td>
<td>6.4</td>
<td>5.8</td>
</tr>
<tr>
<td>2005-06 (n=128)</td>
<td>5.7</td>
<td>5.5</td>
<td>6.1</td>
<td>5.5</td>
<td>6.5</td>
<td>6.0</td>
<td>6.6</td>
<td>6.0</td>
</tr>
<tr>
<td>2006-07 (n=127)</td>
<td>5.7</td>
<td>5.7</td>
<td>6.0</td>
<td>5.6</td>
<td>6.3</td>
<td>5.9</td>
<td>6.4</td>
<td>5.9</td>
</tr>
<tr>
<td>2007-08 (n=106)</td>
<td>5.7</td>
<td>5.6</td>
<td>6.0</td>
<td>5.5</td>
<td>6.6</td>
<td>5.6</td>
<td>6.4</td>
<td>6.0</td>
</tr>
</tbody>
</table>
New and Significant

- Creation of an exempt group of ultra-high performing classrooms – five-year average of 6.50 and above

- First implementation of a classroom literacy measure, the Early Language and Literacy Classroom Observation (ELLCO)

- Results from the ELLCO

- No additional cost to funders for these implementations – instead, a cost-effective redeployment of existing funds
ELLCO in RECAP

ELLCO - Classroom Observation by Year
EEP D and RECAP Spring Observations

<table>
<thead>
<tr>
<th>School Year</th>
<th>Classroom Observation Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05 EEP D (n=35)</td>
<td>3.8</td>
</tr>
<tr>
<td>2005-06 EEP D (n=40)</td>
<td>4.0</td>
</tr>
<tr>
<td>2006-07 EEP D (n=23)</td>
<td>4.0</td>
</tr>
<tr>
<td>2007-08 RECAP (n=29)</td>
<td>4.7</td>
</tr>
<tr>
<td>2007-08 RECAP Exempt (n=21)</td>
<td>4.9</td>
</tr>
</tbody>
</table>

(full range is 1 to 5)
Outcomes:
Child Observation Record
Stable Results in the COR

2007-08 RECAP Annual Report
Average Entrance & Growth COR Scores
for the Last 2 Years

Average COR Score

<table>
<thead>
<tr>
<th>COR Skill Area and Year (COR23 was used in both 2006-07 and 2007-08)</th>
<th>Gain</th>
<th>Entrance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language &amp; Literacy 06-07</td>
<td>2.10</td>
<td>1.07</td>
</tr>
<tr>
<td>Language &amp; Literacy 07-08</td>
<td>2.24</td>
<td>1.15</td>
</tr>
<tr>
<td>Math &amp; Science 06-07</td>
<td>2.15</td>
<td>1.23</td>
</tr>
<tr>
<td>Math &amp; Science 07-08</td>
<td>2.65</td>
<td>1.33</td>
</tr>
<tr>
<td>Movement &amp; Music 06-07</td>
<td>2.76</td>
<td>1.11</td>
</tr>
<tr>
<td>Movement &amp; Music 07-08</td>
<td>2.93</td>
<td>1.10</td>
</tr>
<tr>
<td>Initiative &amp; Social 06-07</td>
<td>2.71</td>
<td>1.06</td>
</tr>
<tr>
<td>Initiative &amp; Social 07-08</td>
<td>2.84</td>
<td>1.04</td>
</tr>
</tbody>
</table>
Outcomes: Socio-Emotional Risks
Socio-emotional risks are linked to lower performance in COR at entrance

2007-08 Average Initial COR Scores
By Initial Risk Status

Note: Controlling for gender and ethnicity.
### COR & T-CRS

#### 2007-08 Average Initial COR Scores

**By Initial Risk Status**

<table>
<thead>
<tr>
<th>Risk Status</th>
<th>COR - Language &amp; Literacy</th>
<th>COR - Math &amp; Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Risk Factors</td>
<td>2.35</td>
<td>2.37</td>
</tr>
<tr>
<td>Behavior Control</td>
<td>2.21</td>
<td>2.24</td>
</tr>
<tr>
<td>Assertive Social Skills</td>
<td>1.80</td>
<td>1.72</td>
</tr>
<tr>
<td>Peer Sociability</td>
<td>2.22</td>
<td>2.12</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>1.78</td>
<td>1.85</td>
</tr>
<tr>
<td>Multiple Risk Factors</td>
<td>1.77</td>
<td>1.83</td>
</tr>
</tbody>
</table>

**Note:** Controlling for gender and ethnicity.

---

**RECAP 2007-2008 Eleventh Annual Report | October 2008**

©2009 CHILDREN'S INSTITUTE INC., 274 N. GOODMAN STREET, SUITE D103, ROCHESTER, NY 14607 | ALL RIGHTS RESERVED
COR/T-CRS Analyses

- COR scores, where students present with one (or multiple) T-CRS Risk Factor(s), show slower growth rates, except for the *assertiveness* risk factor.

- For children who are presenting with items associated for risk on the *assertiveness* scale, they show *more growth* than children who don’t present with any risk factors. In all four subscales, their growth is stronger than their peers.
### Prevalence of Socio-Emotional Risk Factors

<table>
<thead>
<tr>
<th>Risk Factors</th>
<th>2005-06</th>
<th>2006-07</th>
<th>2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Risk Factors</td>
<td>77.3%</td>
<td>76.9%</td>
<td>78.0%</td>
</tr>
<tr>
<td>Behavior Control</td>
<td>2.8%</td>
<td>3.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Assertive Social Skills</td>
<td>2.8%</td>
<td>2.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Peer Sociability</td>
<td>2.5%</td>
<td>1.6%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Task Orientation</td>
<td>3.3%</td>
<td>3.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Multiple</td>
<td>11.3%</td>
<td>12.3%</td>
<td>10.5%</td>
</tr>
</tbody>
</table>

By Year

- **2005-06**
- **2006-07**
- **2007-08**
COR Follow-Up Kindergarten Analyses

Marginal mean score analyses

- These analyses studied RCSD kindergarten students comparing the RECAP cohort to the non-RECAP cohort

- The 2006-2007 RECAP cohort (equivalently, 2007-2008 RCSD kindergarten) favors the RECAP students

- A new discovery: For this group of students it appears as though their gains in kindergarten are actually increasing at an increasing rate, as compared to the non-RECAP cohort
Measurable Benefits of the RECAP Prekindergarten Experience

2006-07 Kindergarten COR Total Marginal Mean Scores
(Marginal means shown are means adjusted for covariates such as gender and race/ethnicity)

<table>
<thead>
<tr>
<th></th>
<th>Fall 2006*</th>
<th>Spring 2007*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECAP Students</td>
<td>3.14</td>
<td>4.25</td>
</tr>
<tr>
<td>non-RECAP Students</td>
<td>2.93</td>
<td>4.08</td>
</tr>
</tbody>
</table>

RECAP Students: N=1,070 in fall, 1,033 in spring
non-RECAP Students: N=968 in fall, 996 in spring
Note: * Signifies differences between RECAP and Non-RECAP groups significant at Pr(t) < .05
Marginal Mean Score Analyses

Measurable Benefits of the RECAP Prekindergarten Experience

2007-08 Kindergarten COR Total Marginal Mean Scores
(Marginal means shown are means adjusted for covariates such as gender and race/ethnicity)

<table>
<thead>
<tr>
<th></th>
<th>Fall 2007*</th>
<th>Spring 2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>RECAP P Students</td>
<td>3.11</td>
<td>4.23</td>
</tr>
<tr>
<td>non-RECAP P Students</td>
<td>3.03</td>
<td>4.05</td>
</tr>
</tbody>
</table>

RECAP Students: N=1,128 in fall, 1,088 in spring
non-RECAP Students: N=1225 in fall, 1245 in spring
Note: * Signifies differences between RECAP and Non-RECAP groups significant at Pr(t) < .05
Tracking of Three RECAP Cohorts

in RCSD Kindergarten

- Follow-up kindergarten analyses where COR growth rates of children were examined after their RECAP prekindergarten year, followed by summer, and then again during their kindergarten year.

- The trend that emerges, on average, all Pre-K students regardless of their ethnicity or gender experience growth in very similar, almost identical, patterns.

- This trend is also seen again during the “summer-months drop” where the students’ growth patterns decline, again, regardless of ethnicity or gender.
Tracking of 2006-07 RECAP Students

The graph shows the tracking of 2006-07 RECAP Students from Fall 2006-07 to Spring 2007-08 in Pre-K Total COR Scores and their follow-up in 2007-08 Kindergarten Total COR Scores. The means are shown by race/ethnicity and gender. The approximate size of N by subgroup is as follows: W-M n=53, B-M n=225, H-M n=79, W-F n=37, B-F n=200, and H-F n=71.

The graph includes only students with COR scores at all 4 points in time.

The table below summarizes the mean scores for each group:

<table>
<thead>
<tr>
<th>Group</th>
<th>Fall 2006-07</th>
<th>Spring 2006-07</th>
<th>Fall 2007-08</th>
<th>Spring 2007-08</th>
</tr>
</thead>
<tbody>
<tr>
<td>White-Male</td>
<td>2.46</td>
<td>3.75</td>
<td>3.05</td>
<td>4.45</td>
</tr>
<tr>
<td>Black-Male</td>
<td>2.49</td>
<td>3.68</td>
<td>3.01</td>
<td>4.13</td>
</tr>
<tr>
<td>Hispanic-Male</td>
<td>2.42</td>
<td>3.54</td>
<td>3.02</td>
<td>4.06</td>
</tr>
<tr>
<td>White-Female</td>
<td>2.48</td>
<td>3.75</td>
<td>3.29</td>
<td>4.39</td>
</tr>
<tr>
<td>Black-Female</td>
<td>2.62</td>
<td>3.84</td>
<td>3.30</td>
<td>4.36</td>
</tr>
<tr>
<td>Hispanic-Female</td>
<td>2.79</td>
<td>3.89</td>
<td>3.34</td>
<td>4.43</td>
</tr>
</tbody>
</table>
Pre-K Children with Disabilities

Understanding Pre-K children with disabilities’ academic performance:

- Comparison to children who do not have disabilities
- Assess whether current levels of services are sufficient for children with disabilities
- Determine if there is the additional need to understand how children with disabilities grow with traditional curricula
- Determine if their learning could be augmented further in order for them to stay on track with their cohort
COR Language Comparison: General and Special Education Students 2006-07 and 2007-08

<table>
<thead>
<tr>
<th>Testing Time</th>
<th>Special ed. (06-07)</th>
<th>Special ed. (07-08)</th>
<th>General ed. (06-07)</th>
<th>General ed. (07-08)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>1.8</td>
<td>1.9</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Spring</td>
<td>2.7</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Findings and Implications

The significant differences on the academic scales for both year’s cohorts tells us that indeed children who are classified with a disability are growing at a slower academic rate.
Family Involvement Questionnaire

RECAP Family Involvement Questionnaire
2006-2007 and 2007-2008 Cohorts

Factors and Total (n ranging from 732 and 742)

Mean Values (range is 1 to 4)

- School Involvement 0607: 1.8
- School Involvement 0708: 1.6
- Home Involvement 0607: 3.4
- Home Involvement 0708: 3.2
- Parent-Teacher Communication 0607: 2.2
- Parent-Teacher Communication 0708: 2.6
- Total Involvement 0607: 2.5
- Total Involvement 0708: 2.5

©2009 CHILDREN'S INSTITUTE INC., 274 N. GOODMAN STREET, SUITE D103, ROCHESTER, NY 14607 | ALL RIGHTS RESERVED
Summary of Findings

- Classroom quality continues to be exceptionally strong
- ELLCO assessments showed exemplary performance by the pilot teachers
- Both COR and T-CRS demonstrated consistency across multiple years and domains
Summary of Findings

- Three-year tracking of the RECAP cohorts establishes that all Pre-K students experience growth in very similar, almost identical patterns.

- Pre-K students who receive special services demonstrate lower performance on all four of the COR competencies; furthermore, while they show academic growth, it is at a statistically-significant slower rate than the students who do not receive special services.
Recommendation #1

Track the kindergarten performance on the COR for special education students and for general education students.
Recommendation #2

To measure change in parent involvement during the RECAP school year, we recommend that the Family Involvement Questionnaire be administered once in the fall, and again in the spring.
Recommendation #3

Determine the developmental-growth rate for an urban population of 4-year-old children who are not attending a formal prekindergarten program.
Recommendation #4

Survey the parents/guardians of 4-year-old children who attended prekindergarten programs and of those who did not, to determine the level and extent of formal instructional programs in the children’s lives.
RECAP Processes Succeeding in Chemung County

- Chemung County – entirely different from Rochester (Rural, non-minority)
- Assembly of Chemung County’s “great thinkers” (not unlike Rochester’s efforts), crafting effective policies, combining an assortment of funding sources for an ECE initiative
- Embraced the entire RECAP model – Parents, Providers, Policy-makers; full assessments of students and classrooms
- Chemung ECERS-R Score, 2007: **5.0**
- Chemung ECERS-R Score, 2008: **5.2**
  Nearly a full point above US average
- Demonstrates RECAP’s ability to be replicated elsewhere
Cost-Effectiveness

... Just Two Examples

Proportion of RECAP to RCSD Pre-K Budget:
- Approximately 1.9%
- $190,000 for a budget of more than $10 million
- Contrast with 10% - 20% federal mandates on evaluation

Compare entire RECAP process to one-time Terra Nova:
- RECAP cost per student assessment (2 x 2 assessments; full reports for all), surveys of parents, full ECERS-R; full processing: $20.32 per child
  Versus
- One-time Terra Nova standardized test, May: Approximately $20 per child