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Chemung County School Readiness Project Prekindergarten Assessment Community Report 2009-2010 ECERS-R Results

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SEPTEMBER 2010

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Acknowledgements

We wish to thank the many partners who contributed their efforts to make this project possible. Such partners include programs, foundations, and other agencies, each consisting of many individuals who, year after year, give their time, hard work, ideas, and support to the Chemung County School Readiness Project prekindergarten program assessment.

Contributing partners include the Chemung County School Readiness Project-Readiness Council and Lead Agencies, Chemung County Child Care Council, Elmira City School District, Elmira Heights School District, Economic Opportunity Program of Chemung County/Child Development Head Start, and Horseheads Central School District.

We especially wish to thank Donald Keddell for his continued leadership in bringing so many organizations and individuals together towards a common vision of quality care and early education for children and families in Chemung County. We acknowledge the steps taken towards building and maintaining local capacity of Master Observers and the establishment of the Chemung County ECERS-R Coordinator for harmonization of all ECERS-R processes.

Special thanks are extended to the Master Observers who completed the ECERS-R on all early education and care programs, many for a fourth year in a row, for the Chemung County School Readiness Project. We acknowledge their continued commitment to satisfy the evaluation component of the Project.

Continued thanks to Harriet Sweet, Chemung County ECERS-R Coordinator, for her meticulous organization of program-specific information and management of independent, well trained Master Observers for the School Readiness Project.

We are excited about the future of the Chemung County School Readiness Project and its impact on young children's experiences. We look forward to continuing our partnership to promote informed decision making to enrich and improve early education and care programs and school performance.

Chemung County School Readiness Project – Prekindergarten Assessment

The Chemung County School Readiness Project – Prekindergarten Assessment completed its fourth year of assessing program quality in the Chemung County early education and care community. With the goal of focusing on a common set of quality standards, the Early Childhood Environment Rating Scale – Revised (ECERS-R) was used to observe 50 preschool classrooms throughout the county. Training for teachers in the use of the ECERS-R was provided to support a sustainable system of program quality improvement using feedback from program observations.

These early childhood partners participated in the Chemung County School Readiness Project:

- ❖ Chemung County School Readiness Project-Readiness Council and Lead Agencies
- ❖ Chemung County Child Care Council
- ❖ Elmira City School District
- ❖ Elmira Heights School District
- ❖ Economic Opportunity Program of Chemung County/Child Development Head Start
- ❖ Horseheads Central School District

ECERS-R – A measure of Classroom Environment Quality

Classroom quality is key to the provision of early education services. Independent, well-trained observers rated the quality of classroom environments using the Early Childhood Environment Rating Scale – Revised (ECERS-R). The ECERS-R was developed at the University of North Carolina in the 1970s, and revised in 1998 (Harms, Clifford & Cryer, 1998). It is the most widely used objective observational tool of early education classroom quality and environment. The ECERS-R measures seven areas of classroom quality:

- ❖ Space and Furnishings
- ❖ Personal Care Routines
- ❖ Language and Reasoning
- ❖ Activities
- ❖ Interaction
- ❖ Program Structure
- ❖ Parents and Staff

Each area contains from 5 to 10 items that represent various elements of that area. The rating scale ranges from 1 to 7. A score of 1 is considered “inadequate,” a score of 3 as meeting “minimal” standards, a score of 5 is equivalent to meeting “good” quality standards, and a score of 7 indicates “excellent” quality.

After an observer is trained and meets inter-rater reliability of .85 for ECERS-R overall scores with a master trainer, he or she is normally assigned five to eight classrooms. During a typical observation, an observer spends three to five hours observing the classroom, focusing on the 43 distinct items that make up the ECERS-R. After the classroom observation, the observer typically spends an additional 30 to 60 minutes interviewing the teacher to address any questions about classroom activities or features that could not be discerned during the observation phase.

How are master observers trained?

In the first year of training, observers must participate in a fifteen-hour training program. In every subsequent year, four to five hours of additional training are required. Refinement of observation skills, inter-rater reliability, logistics of the observation process, observation guidelines, and protocol are carefully reviewed with master observers every year.

Master Observers are trained to attain and maintain a minimum level of inter-rater reliability ($a/a+d > .80$). Master Observers are recruited and selected based on their years of experience in early childhood education (>10 years), skills in program observation, and their personal interest. A local cadre of eight ECERS-R Master Observers is now established in the Chemung County region. No new Master Observers were trained this year.

Locally based ECERS-R Coordinator established

To coordinate the multiple processes within the ECERS-R evaluation component of the Readiness Project, a two-year transitioning effort culminated in the establishment of a Chemung County Coordinator. It was important to have a locally based person to strengthen the ECERS-R effort overall. The ECERS-R Coordinator worked closely with the Rochester based ECERS-R Coordinator/Trainer to manage each phase of the process. Training took place both in Chemung County and Rochester, New York. The Coordinator communicated with school principals and agency directors to assure that program-specific information was current for the evaluation year. Local training of area Master Observers in addition to teacher/director/administrator training was directly managed by the Coordinator. Assuming the bulk of responsibility for project coordination, the Coordinator continued to work in tandem with the Rochester Coordinator to execute the ECERS-R evaluation component in Chemung County.

Where is the ECERS-R being used?

The ECERS-R is used in many studies investigating the quality and outcomes of prekindergarten education, both in the United States and internationally. The ECERS-R was adopted to measure the quality of prekindergarten classrooms funded by universal prekindergarten in the State of Georgia. It was also used in the cost, quality, and outcome studies that assessed quality in 120 classrooms in three states, in a study involving 150 classrooms in Florida, and in a study that evaluated the quality of 32 Head Start classrooms. Studies in Germany, France, Portugal, and Sweden have used the ECERS-R. In short, the ECERS-R is one of the premiere measures used to evaluate quality of prekindergarten environments both in the U.S. and around the world.

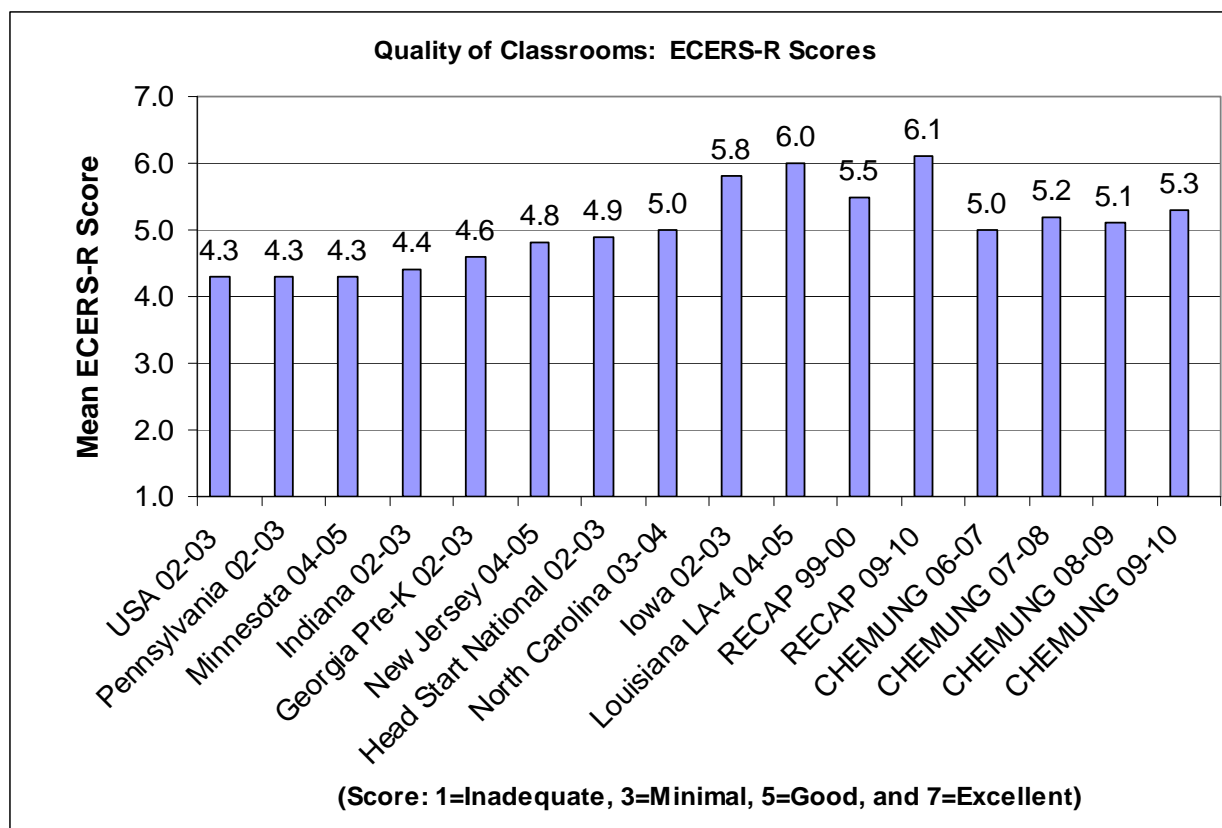
Quality of Chemung County Preschool Classrooms

How does the Chemung County formal Early Childhood Education (ECE) system compare with ECE systems across the US?

Using the ECERS-R allows comparison of the quality of the prekindergarten programs in Chemung County with pre-k programs in other states and nations. Before any comparison is made, however, it is important to be certain that classrooms and student populations are similar.

In Figure 1 below, we can see that this year 50 participating Chemung County classrooms had a mean ECERS-R score of 5.3. The median score was 5.3. For comparison purposes, the first year that a mean ECERS-R score was published for Rochester's RECAP program was in 1999-2000, when the mean was 5.5. This year the RECAP mean ECERS-R was 6.1. The latest available national average score was 4.3.

Figure 1. Overall Quality of Participating Chemung County Classrooms



Classroom/Program Observation Process

This year the observation process took place over five months. It began with the *Introductory ECERS-R Training* in January, in which 20 providers, teachers, and directors participated. The three-hour training session included a brief introduction by a Readiness Project representative, who framed the purpose and vision of the Chemung County School Readiness Project and the benefits of using a standardized measure to assess classroom program quality. Participants learned observation and scoring techniques and gained an understanding of the components of the ECERS-R and the logistics of the classroom/program observation process. Classroom observations by master observers took place in February, March, April, and May.

The program observation process:

- ❖ The observer contacts the classroom teacher/provider to schedule the observation date.
- ❖ The program observation occurs (3 to 6 hours).
- ❖ The observer conducts a 30-60 minute interview with the teacher/provider immediately after the observation to obtain information not evident during observation.
- ❖ The observer completes the score sheet and submits it to Children's Institute for processing.
- ❖ The project coordinator reviews the score sheet for accuracy.
- ❖ The score sheet is checked again for accuracy by a data clerk, the information is entered into the database and a summary report is produced.
- ❖ Copies of the original score sheet and summary report are mailed directly to the teacher/provider.
- ❖ The teacher/provider reviews the information.
- ❖ If the teacher/provider disagrees with any item(s) in the report and wants to address this, he or she requests a Collaborative Review (outlined below).

Collaborative Review Process

After an observation is complete, the independent observer returns the completed score sheet to Children's Institute for processing. Copies of the score sheet and summary report are returned directly to the teacher, along with a cover letter that serves as a guide in their review of the report. The letter includes an invitation to contact the project coordinator if the teacher feels a score does not accurately represent the program.

- ❖ If a teacher questions any item(s) and wishes to address this formally, he or she contacts the project coordinator to obtain a Collaborative Review Request Form within which he or she outlines the details of the item(s) in question with additional supporting information.
- ❖ Upon receipt of the Collaborative Review Request, the project coordinator reviews the information provided by the teacher, consults with the independent Master Observer who completed the observation, and conducts a detailed re-examination of each quality

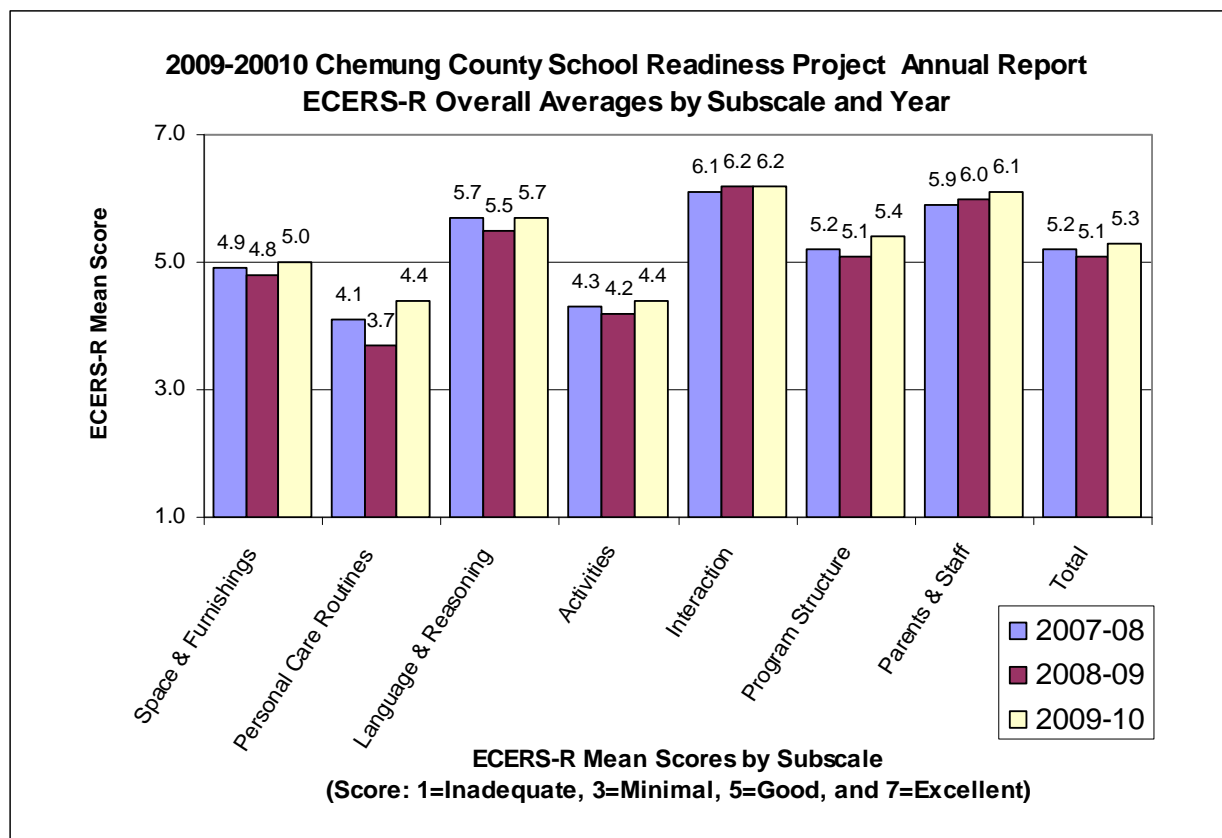
indicator score questioned. After consideration of these references, a determination is made whether any items should be scored differently.

- ❖ In a detailed letter to the teacher, the project coordinator formally addresses each questioned item and whether the item(s) score has been changed. A revised copy of the score sheet is returned with any applicable adjusted scores as well as a new summary report.
- ❖ The revised scores are entered into the database.
- ❖ If the teacher informs the project coordinator that he or she remains dissatisfied with the results of the process thus far, the coordinator arranges for a second independent observer to conduct a second complete observation and submit a formal report.

Summary of Results	2008-09	2009-10
Number of reviews	0 out of 49	1 out of 50
Percent	0%	2%
Total number of items reviewed	0	6
Total number of items changed	0	5
Average change in overall score	0	0.4

Scores by Subscale

Figure 2. Mean Scores by Subscale and Total



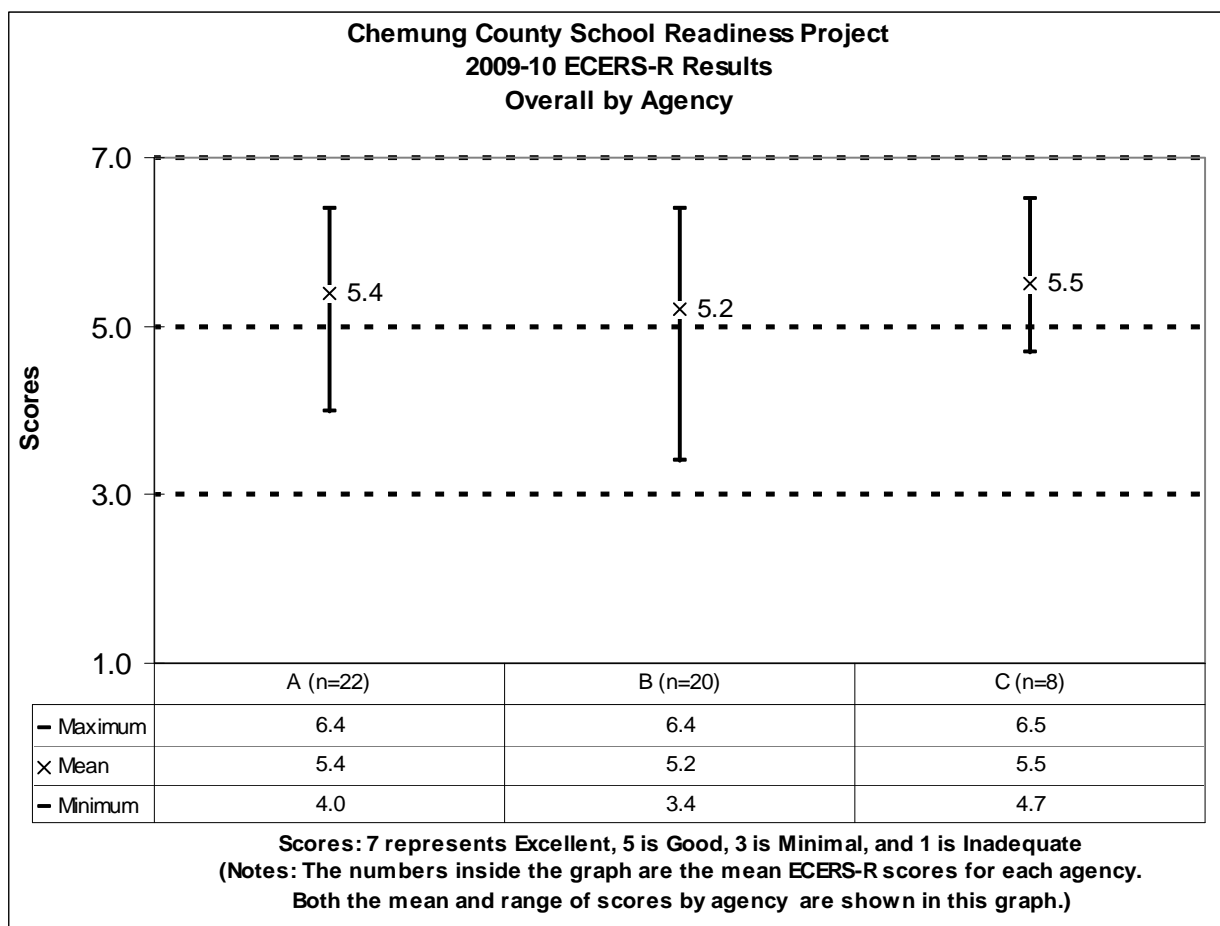
Subscale	N	Mean	Std. Dev.	Minimum	Maximum
Space & Furnishings	50	4.98	0.81	3.62	7.00
Personal Care Routines	50	4.37	1.44	1.33	6.50
Language & Reasoning	50	5.67	1.11	3.00	7.00
Activities	50	4.37	0.95	2.30	6.00
Interaction	50	6.21	1.13	1.60	7.00
Program Structure	50	5.43	1.09	3.25	7.00
Parent & Staff Development	50	6.11	0.62	4.33	7.00
Total – All Subscales	50	5.31	0.71	3.41	6.51

Note: * Scores have a potential range of 1 to 7, 7 being the highest.

Scores by Agency

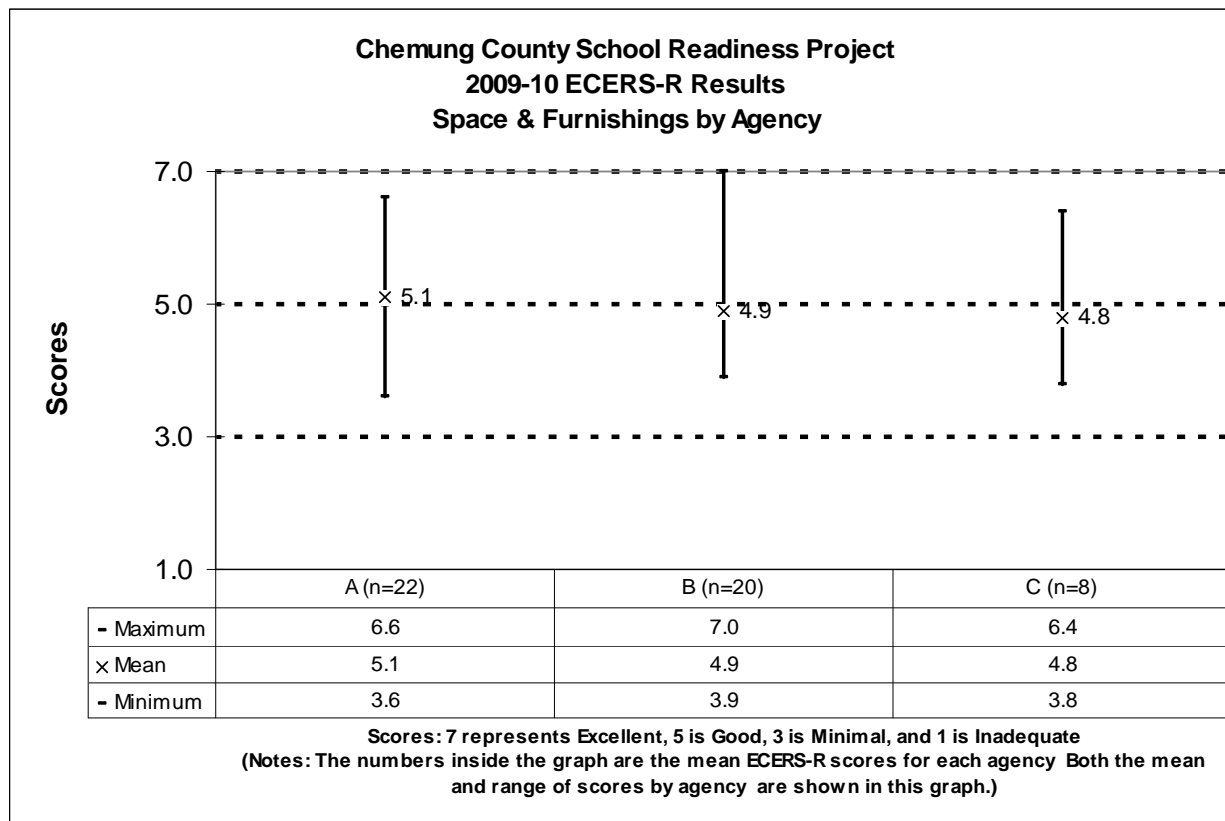
Figures 3 through 10 below show the results by Agency for each of the ECERS-R subscales and totals.

Figure 3. All Subscales Combined



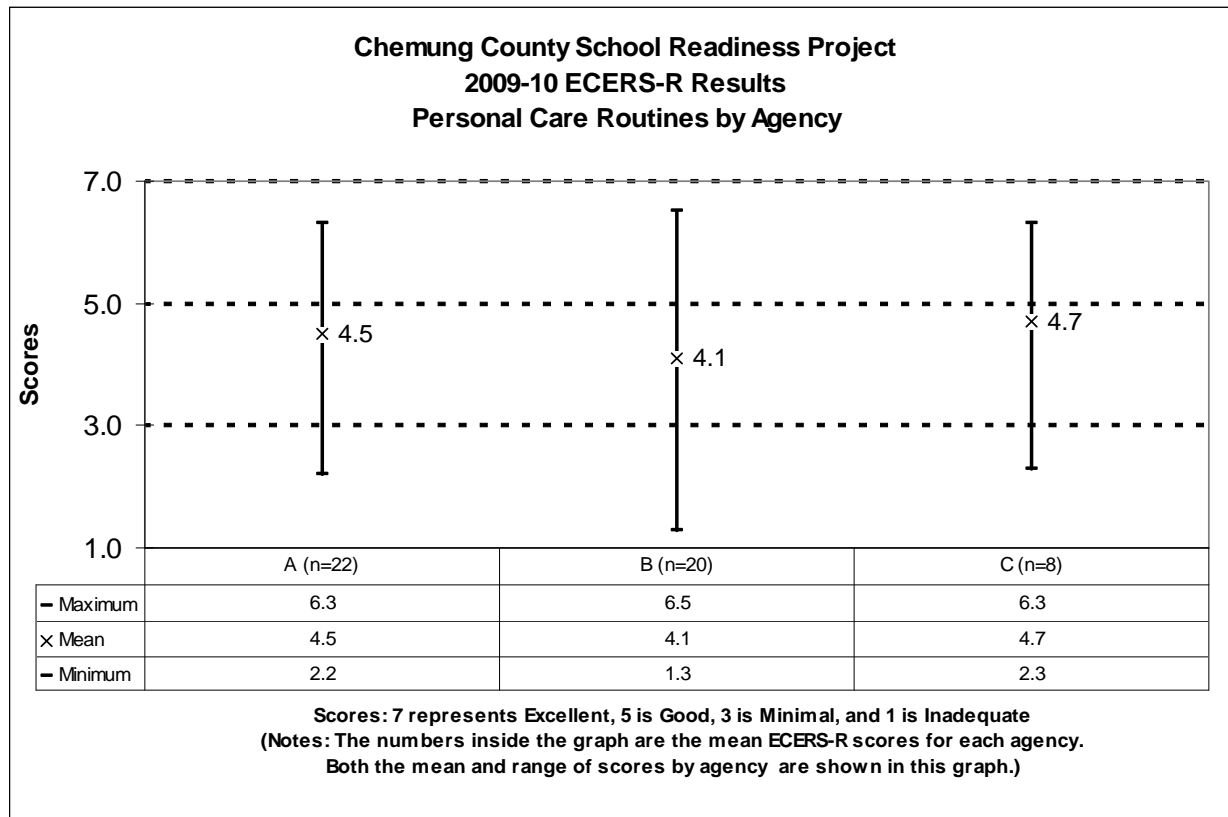
Overall - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	0	0	0	0	0.0%
3-3.9	0	2	0	2	4.0%
4-4.9	4	5	2	11	22.0%
5-5.9	15	11	4	30	60.0%
6-6.9	3	2	2	7	14.0%
7.0	0	0	0	0	0.0%
Total	22	20	8	50	100.0%

Figure 4. Space & Furnishings Subscale



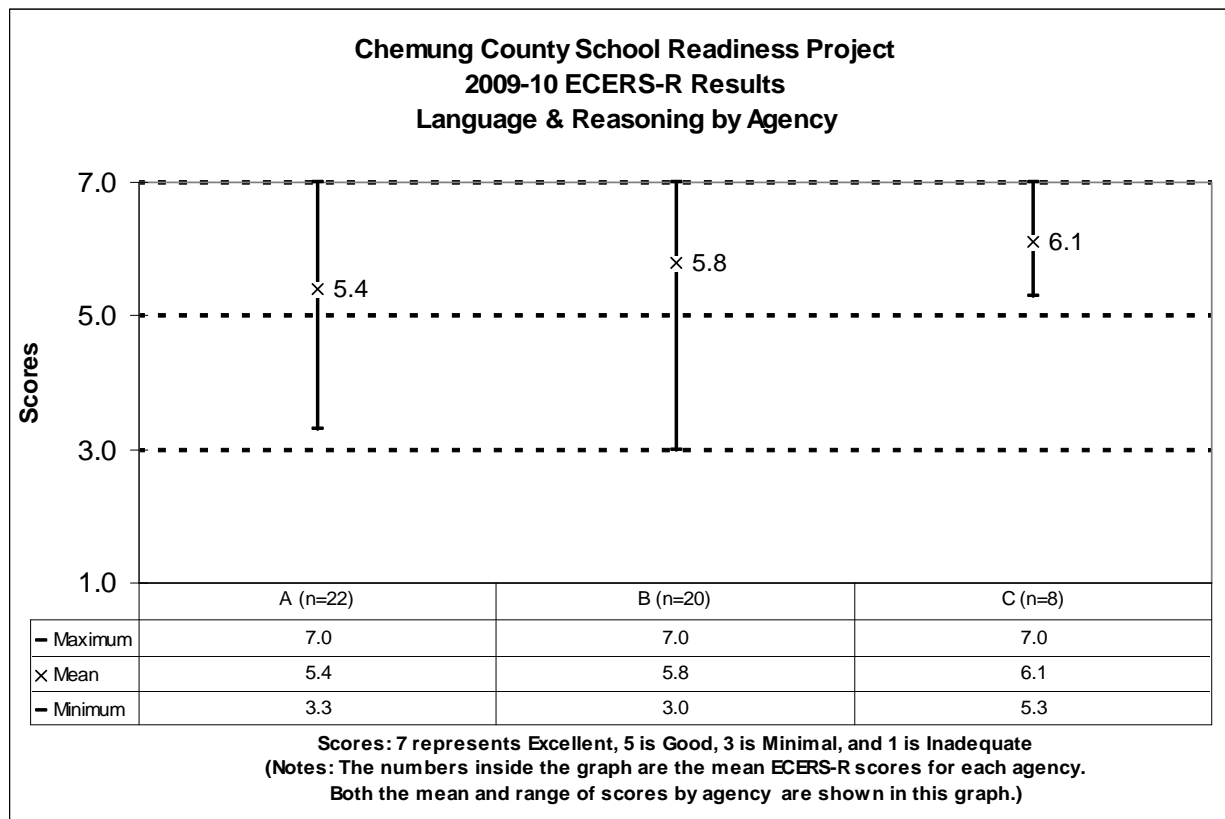
Space and Furnishings - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	0	0	0	0	0.0%
3-3.9	2	1	2	5	10.0%
4-4.9	7	10	3	20	40.0%
5-5.9	9	8	2	19	38.0%
6-6.9	4	0	1	5	10.0%
7.0	0	1	0	1	2.0%
Total	22	20	8	50	100.0%

Figure 5. Personal Care Routines Subscale



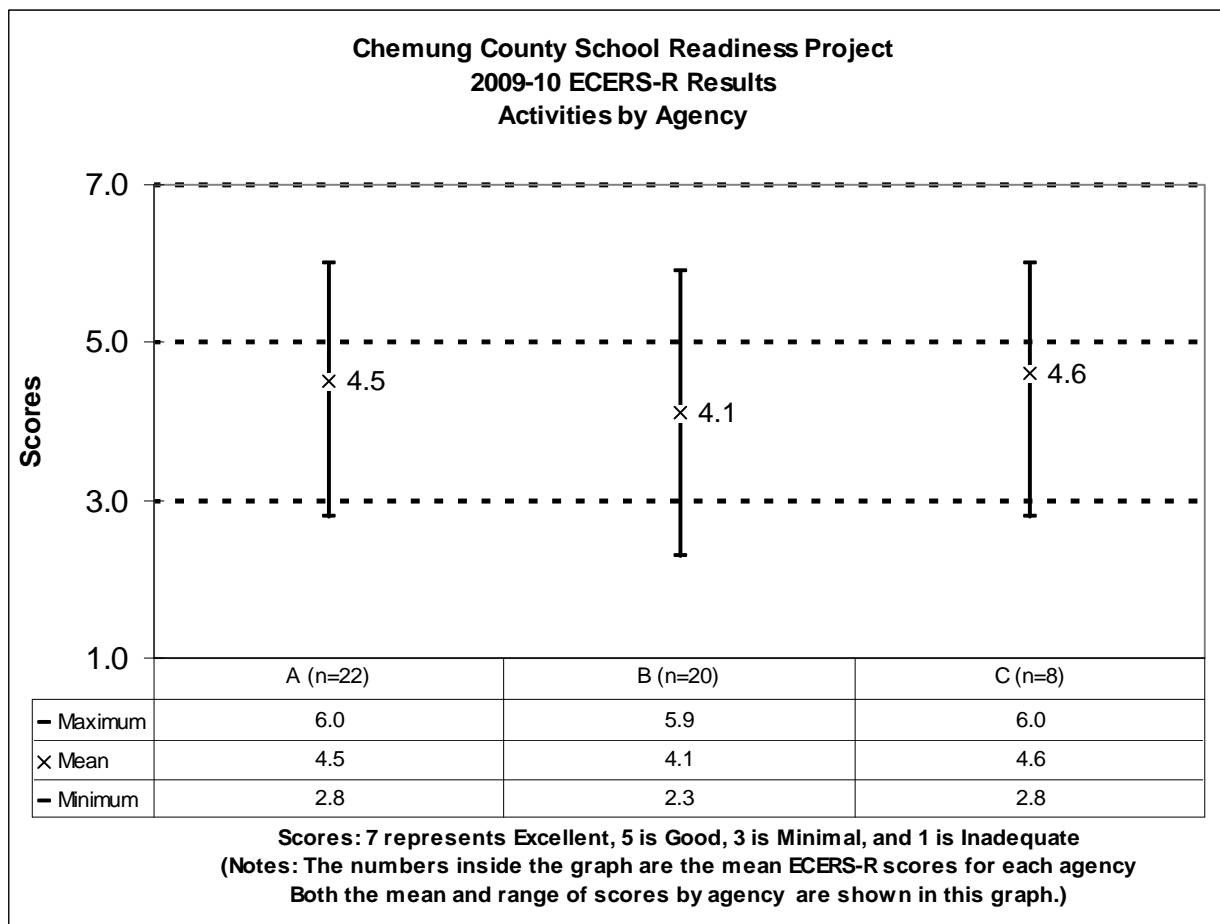
Personal Care Routines - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	2	0	2	4.0%
2-2.9	1	5	1	7	14.0%
3-3.9	5	1	2	8	16.0%
4-4.9	8	4	0	12	24.0%
5-5.9	5	4	4	13	26.0%
6-6.9	3	4	1	8	16.0%
7.0	0	0	0	0	0.0%
Total	22	20	8	50	100.0%

Figure 6. Language & Reasoning Subscale



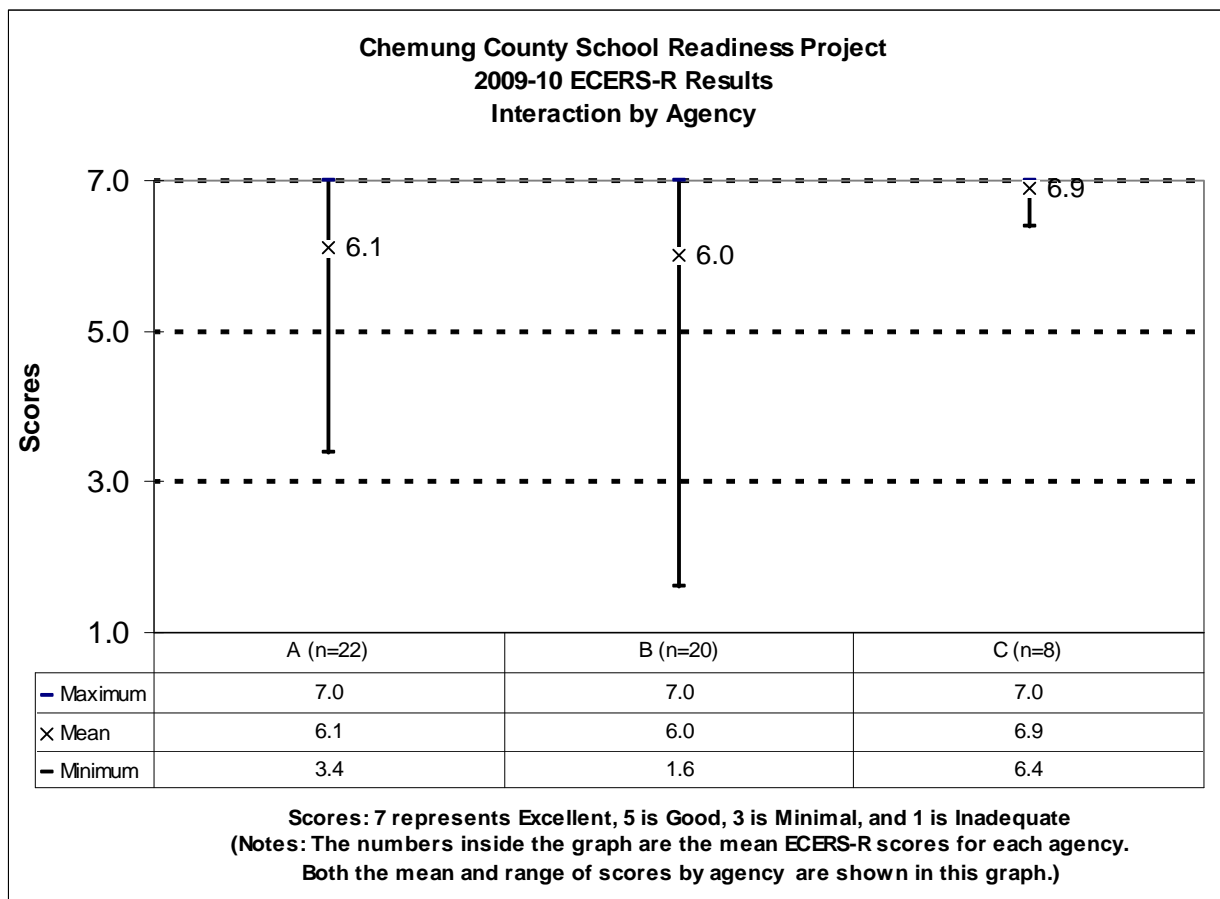
Language & Reasoning - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	0	0	0	0	0.0%
3-3.9	3	2	0	5	10.0%
4-4.9	3	2	0	5	10.0%
5-5.9	6	4	2	12	24.0%
6-6.9	8	8	4	20	40.0%
7.0	2	4	2	8	16.0%
Total	22	20	8	50	100.0%

Figure 7. Activities Subscale



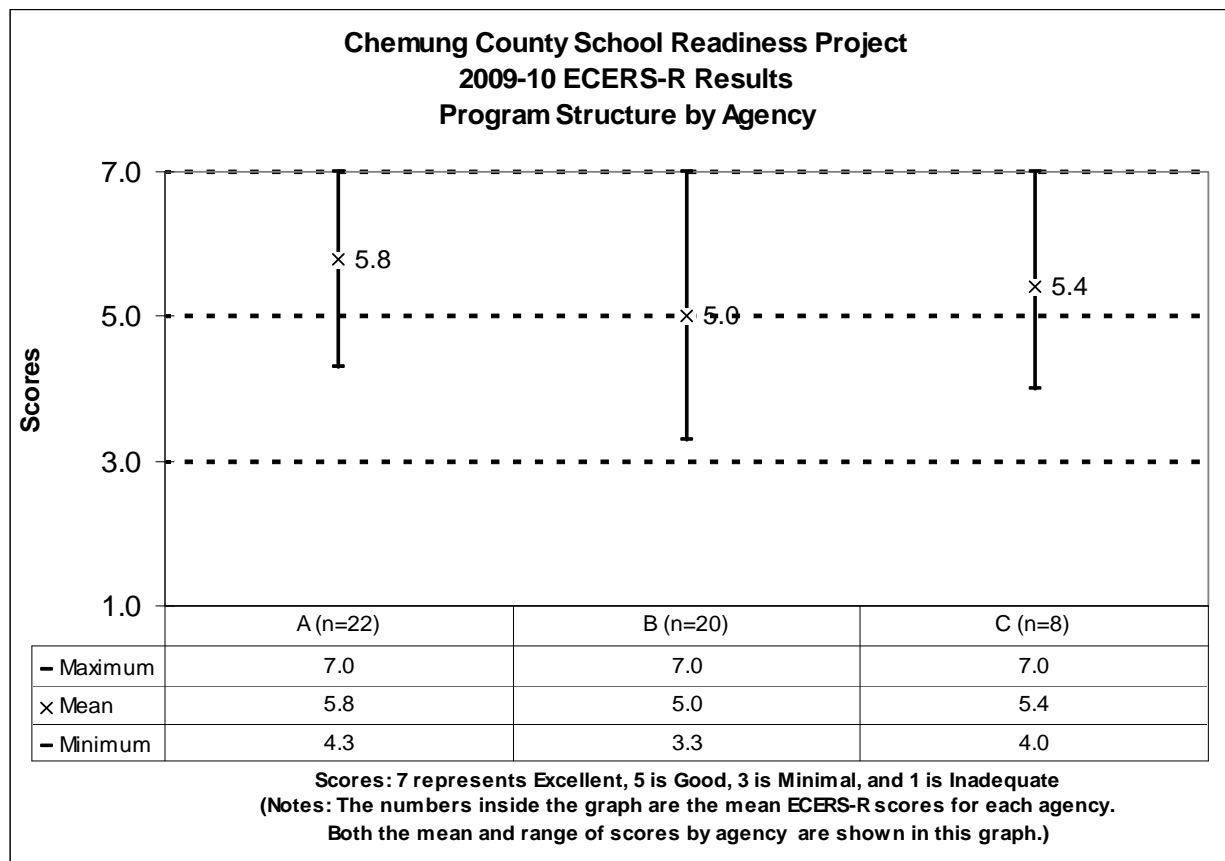
Activities - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	1	3	1	5	10.0%
3-3.9	2	4	1	7	14.0%
4-4.9	15	9	2	26	52.0%
5-5.9	3	4	2	9	18.0%
6-6.9	1	0	2	3	6.0%
7.0	0	0	0	0	0.0%
Total	22	20	8	50	100.0%

Figure 8. Interaction Subscale



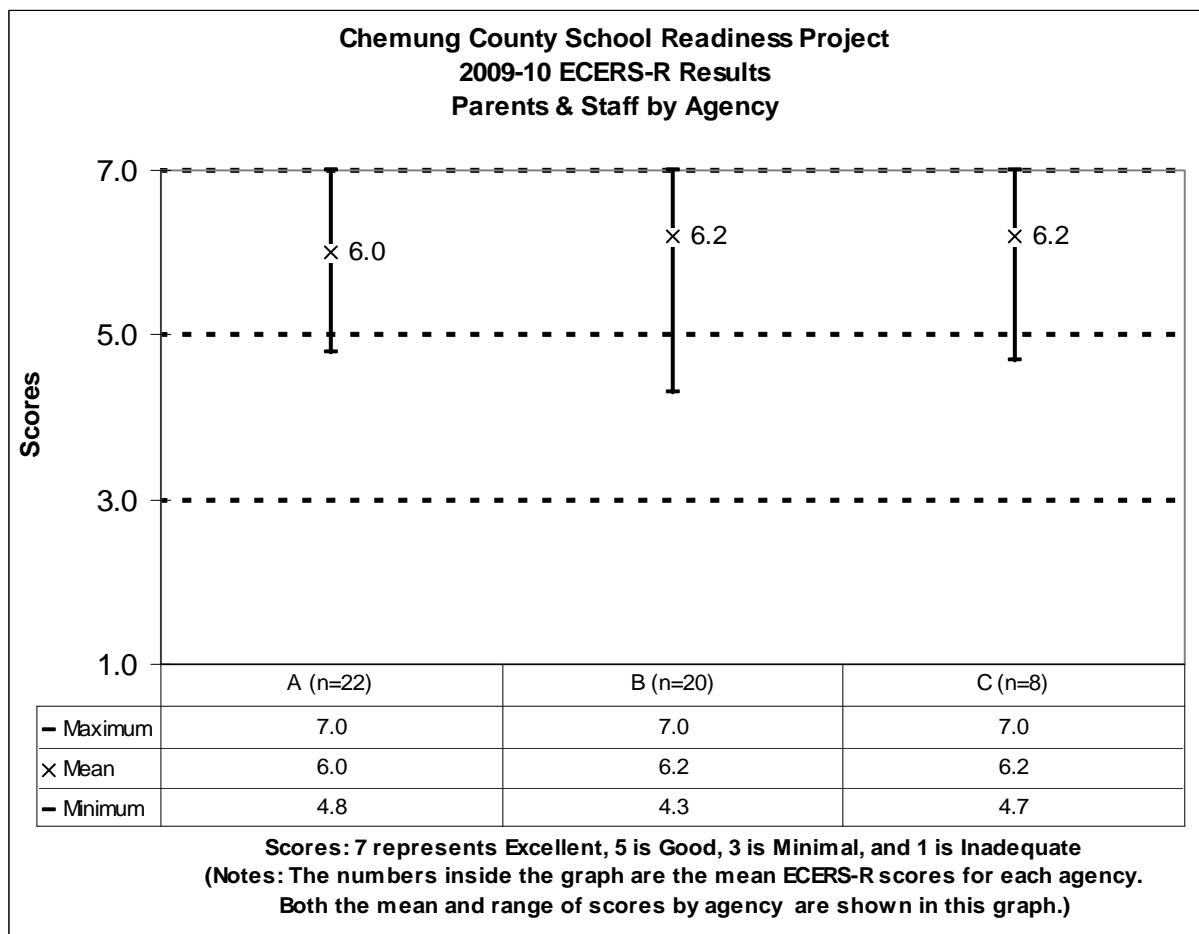
Interaction - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	1	0	1	2.0%
2-2.9	0	1	0	1	2.0%
3-3.9	2	0	0	2	4.0%
4-4.9	0	0	0	0	0.0%
5-5.9	2	2	0	4	8.0%
6-6.9	15	11	3	29	58.0%
7.0	3	5	5	13	26.0%
Total	22	20	8	50	100.0%

Figure 9. Program Structure Subscale



Program Structure - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	0	0	0	0	0.0%
3-3.9	0	2	0	2	4.0%
4-4.9	3	8	3	14	28.0%
5-5.9	8	6	2	16	32.0%
6-6.9	9	1	1	11	22.0%
7.0	2	3	2	7	14.0%
Total	22	20	8	50	100.0%

Figure 10. Parents & Staff Subscale



Parents & Staff - Number of Classrooms Within Score Range by Agency					
Score Range	A	B	C	Total	Percent
1-1.9	0	0	0	0	0.0%
2-2.9	0	0	0	0	0.0%
3-3.9	0	0	0	0	0.0%
4-4.9	1	1	1	3	6.0%
5-5.9	8	5	1	14	28.0%
6-6.9	12	13	5	30	60.0%
7.0	1	1	1	3	6.0%
Total	22	20	8	50	100.0%

Reliability of the ECERS-R

What does Cronbach's alpha mean?

Cronbach's alpha is a test of a measure's internal consistency. It is sometimes called a "scale reliability coefficient." For any assessment process, it is important to know whether the same set of questions measures a similar construct. Measures are declared to be reliable only when they provide reliable responses.

Cronbach's alpha assesses the internal reliability of a measure's answers. By measuring and reporting Cronbach alpha values, we have what is considered a numerical coefficient of reliability. The internal reliability (alpha) of the ECERS-R for the 50 Chemung County observations this year was 0.89.

What is the Inter-Rater reliability of ECERS-R?

As part of the ongoing effort to assure the accuracy of the measures used, many classrooms are observed by two observers so that we can calculate the level of agreement or inter-rater reliability among the cadre of observers.

Table 2 below shows the key results for the Chemung County inter-rater reliability. The inter-rater reliability was $r=0.95$ when comparing total scores (n=7 dual observations). When comparing reliability results on an item-by-item basis, using (a/a+d; a=agreement and d=disagreement) the median inter-rater reliability was **0.86** for exact matches and **0.98** for differences of one point. *Keeping in mind that observers are trained to a 0.85 level of reliability for ECERS-R overall scores with a master trainer, these results do indicate a high level of reliability.*

Table 2			
2009-10 Chemung County School Readiness Project			
Inter-Rater Reliability of ECERS-R in Chemung County			
	Chemung County Observers 2007-08	Chemung County Observers 2008-09	Chemung County Observers 2009-10
Sample N	6	9	7
Median Inter-Rater Reliability for Exact Matches	0.84	0.90	0.86
Median Inter-Rater Reliability for Differences of One Point Matches	0.93	0.93	0.98
Space & Furnishings	0.68	0.97*	0.87
Personal Care Routines	0.82	0.91*	0.96
Language & Reasoning	0.92	0.97*	0.76
Activities	1.00*	0.98*	0.98
Interaction	0.97*	0.98*	0.91
Program Structure	0.99*	0.99*	0.89
Parent and Staff Development	0.97*	0.91*	0.56
Total ECERS-R Score	0.97*	1.00*	0.95
Note: * Signifies that these values were significant at $p < .05$. Krippendorf's Alpha used in 2009-2010 instead of Pearson Correlation Coefficient			

Summary of Findings

Over the length of the project, there has been marked progress in ECERS-R scores overall as well as by each subscale. The Personal Care Routines subscale in particular has seen the most improvement, although all ECERS-R subscales show a maintained level of quality across the classrooms.

Each participating partner has sustained an overall score of between 5.2 and 5.5, showing improvement from 2008-09. As of 2009-10, agencies A and C have scores closer to 5.5. Agency C has improved its overall score substantially from 4.9 in 2008-09 to 5.5 in 2009-10.

Conclusions and Recommendations

Programs overall have demonstrated strength in the continuous quality improvement process as measured by the ECERS-R.

One recommendation is to explore specific activities and best practices on part of the provider that lead to higher program quality outcomes. What program changes were implemented? How were teachers supported to improve specific areas of their program? There was notable improvement overall in Personal Care Routines, which typically includes more rigorous and stringent requirements.

Another recommendation is to explore how teachers and administrators are using the data that they receive. Results can drive professional development activities, monitoring areas of strength and areas of opportunity for growth.

We recommend a return to use of the ECERS-R in 2011-2012 after the introduction of the Early Language and Literacy Classroom Observation (ELLCO) to observe if there have been changes in levels of program quality.

Limitations

This evaluation has limitations that should be considered when interpreting the results presented in this report.

The program observations, using the ECERS-R instrument, were conducted by highly trained independent observers using a valid and reliable instrument. However, each program offering was observed only one time. While provisions were made through the Collaborative Review Process for any challenge to the accuracy of the ECERS-R scores by program staff and administration, it is possible that any single assessment might not be representative of a particular program offering. We note, however, that we received only one Collaborative Review Request for ECERS-R assessments in 2009-10 for the observations considered in this report and that the inter-reliability among the observers was rated excellent.