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EVALUATION OF WEST VIRGINIA UNIVERSAL PRE-K: CLASSROOM OBSERVATION FINDINGS.

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Overview

This report presents the results from the classroom observations conducted as part of the *Evaluation of West Virginia's Universal Pre-K* for the 2019-2020 school year. This study is the result of a partnership between the National Institute for Early Education Research, Marshall University, and the West Virginia Department of Education.

In the 2019-2020 school year the research team continued to follow our longitudinal cohort as the children progressed through early elementary, we conducted observations in their third grade classrooms in the Spring of 2020. The school year of 2019-2020 faced unprecedented challenges for school systems, teachers, children and families due to the COVID-19 pandemic. In early March 2020, preschools in WV, much like schools in various parts of the country, closed and did not reopen throughout the rest of 2019-2020 school year. Beyond the massive implications that closures had for programs, teachers, families and children, the 2020 COVID pandemic created interruptions for our evaluation of the program. While most of the classroom observations were completed before the interruption, we were unable to collect information on children´s development in the Spring of 2020.

Consequently, this report summarizes classroom quality for students in a limited sample of WV third grade classrooms (observed before the COVID-19 interruptions took place) and provides a limited description of the environment and teaching practices in these classrooms. We observed 125 third grade classrooms this year using the Classroom Assessment Scoring System K-3 (CLASS K-3). The study focuses on seven counties that made part of the original longitudinal study. Generalization is therefore reliant on the similarities between the counties that are represented in this study and other counties in the state. Participating counties were intentionally selected for the study based on lower enrollment rates in the Universal Pre-K program, which then allowed comparing their progress to that of a non-attending group of children. The following counties are included: Fayette, Greenbrier, Kanawha, Nicholas, Putnam, Roane, and Wood.

The sample of classrooms included is representative of individual districts allow documenting patterns in classroom quality over time.

Study Methods

Sample

In third grade, CLASS data were collected in 125 classrooms. The target sample was of 135 classrooms, but data collection was interrupted by the pandemic. Table 1 represents the full sample of observed classrooms for third grade.

Table 1. Sample by county

County	Third Grade Classrooms
Fayette	16
Greenbrier	14
Kanawha	25
Nicholas	8
Putnam	26
Roane	8
Wood	28
Overall	**125**

*Note: Classroom observations were interrupted in three counties: 1 missing in Wood, 1 missing in Putnam, and 8 missing in Kanawha.

Measures

Classroom Assessment Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008)[1]

The CLASS assesses classroom practices by focusing in the depth and frequency of the interactions between teachers and their students. The observation process consists of four to five 20-minute cycles, each of these followed by 10-minute coding periods.

Interactions are measured through 10 dimensions, which are categorized into three domains. The Emotional Support domain includes four dimensions: Positive Climate, Negative Climate, Teacher Sensitivity, and Regard for Student Perspectives. The Classroom Organization domain includes three dimensions: Behavior Management, Productivity, and Instructional Learning Formats. The Instructional Support domain includes three dimensions: Concept Development, Quality of Feedback, and Language Modeling. Each dimension is measured on a seven-point Likert-type scale, for which a score of one or two indicates low range, a score of three, four, or five indicates mid-range, and a score of six or seven indicates high range of quality. The CLASS dimensions are explained in the Appendix Table A.1.

Data Collection

The classroom sample was specified from the universe of classrooms defined in collaboration with the WVDE and county coordinators. CLASS observers were trained by CLASS certified trainers that met the Teachstone[2] reliability requirements for trainer certification. All observers then successfully completed Teachstone's specified reliability process. Additionally, data collectors took and passed Teachstone's online calibration test mid-way through data collection in order to avoid scoring drift. Observations were collected between January and March 2020. We communicated with schools in advance to schedule appointments for observations, and teacher names were disclosed at that time. Observation scoresheets were cleaned, entered, and analyzed by NIEER.

[1] Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). Classroom Assessment Scoring System™: Manual K-3. Baltimore, MD, US: Paul H Brookes Publishing.

[2] Teachstone is the company that sells CLASS products and manages/sells CLASS observer trainings, certifications etc. All training activity is monitored and reported to them. http://www.teachstone.com/about-teachstone/

Results

Third Grade Classrooms

Third grade classrooms were assessed in the spring of 2020, following the progression of the longitudinal cohort of children in the study. They were enrolled in pre-K in the study's first year, 2015-2016 and enrolled in third grade in 2019-2020.

1. Third Grade Teachers

The classroom observation efforts were accompanied by a teacher survey to third grade teachers focused on capturing information on qualifications and experience. Response rate was 100%. Most lead teachers in 3rd grade reported a B.A. (61.6%) or an M.A. or higher degree (38.4%). Only close to a third of lead teachers reported having been a teacher for zero to five years (28.8%), 27.2% reported having been a teacher six to 10 years, and 44.0% reported more than 10 years of experience. In sum, 71.2% of third grade teachers had six years or more of experience. In addition, 88.8% reported having certification. Only 2.4% of third grade teachers reported annual salaries under $30,000, while 30.4% reported salaries between $30,000 and $40,000, another 48.0% reported between $40,000 and $50,000, and 13.6% reported over $50,000. About 5.6% of teachers did not know or did not wish to share their annual salaries. The average age of third grade teachers is 40.23 (and ranges between 22 and 71). At the time of the CLASS observations, there was an average of 1.15 teacher per classroom present (SD 0.30; range 1.00-2.25), and 15.65 children (SD 3.22; range 8.20-23.75). On average, four children were reported by the teacher as enrolled and with an IEP (SD 2.47; range 0-12).

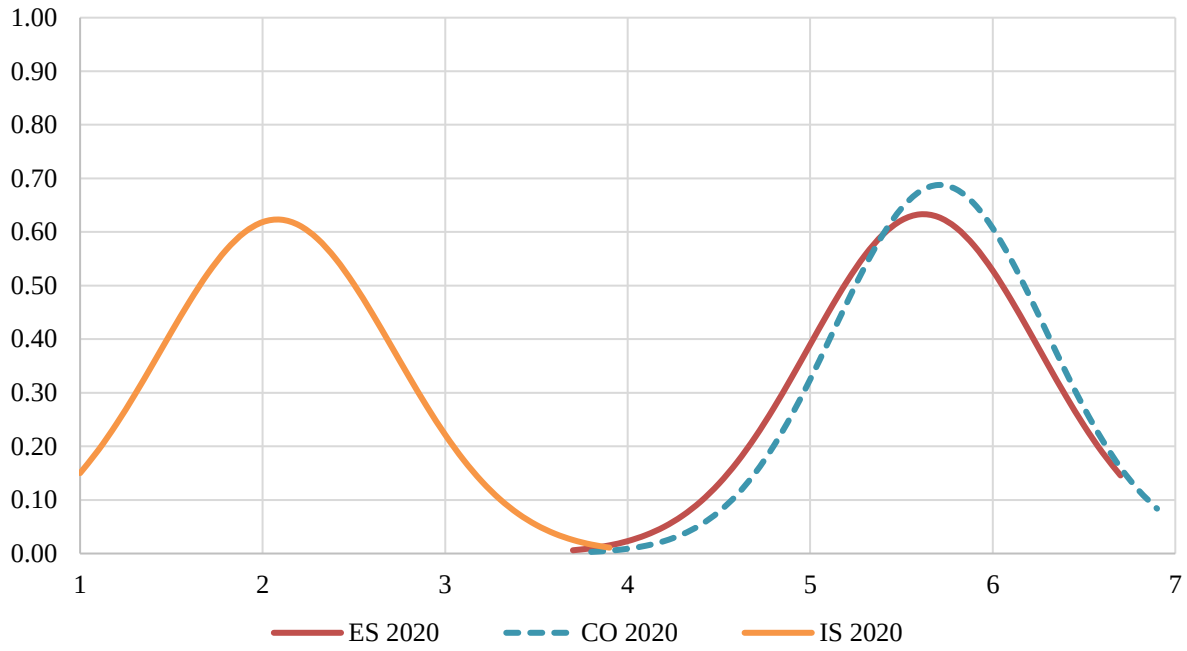
2. Third Grade CLASS Results Spring 2020

Average CLASS scores for the 125 third grade classrooms observed using the CLASS K-3 are reported in Table 2 below. Figure 1 also illustrates the three domain distributions. About 84.8% of classrooms were in the high range for ES (above 5), as well as about 90.4% of classrooms for CO. As for IS, only 12% of classrooms were scored above 3.

Table 2. Third grade CLASS domain means and ranges

CLASS Domains	Spring 2020 (N=125)			
	Mean	(SD)	Min	Max
Emotional Support (ES)	5.62	(0.63)	3.75	6.70
Classroom Organization (CO)	5.71	(0.58)	3.87	6.87
Instructional Support (IS)	2.08	(0.64)	1.07	3.87

Figure 1. Third grade CLASS domain distributions



The average score in the *Emotional Support* (ES) domain was a 5.62, which indicates most classrooms scored in the high-mid range. This shows that teachers foster warm and respectful relationships. Evidence of this includes teachers and children smiling, laughing, and sharing emotional connections. A suggestion for improvement in scores in this domain is ensuring that teachers are aware and responsive to children's academic and emotional needs, and effectively respond in a timely manner. In classrooms where ES is high, the teacher consistently provides comfort, reassurance, and encouragement, which creates an environment where children feel comfortable asking for help and taking risks. A final suggestion for improving scores includes showing flexibility in activities and lessons by incorporating students' interests. In high-ES classrooms teachers give their students autonomy in the classroom through choice and responsibility, elicit children's ideas and perspectives, and allow freedom of movement and placement during learning activities.

Similarly, scores for the *Classroom Organization* (CO) domain average in the high-mid range, at a 5.71. This indicates that teachers are frequently proactive in anticipating problem behaviors, and efficient in using positive redirection techniques when necessary. Teachers implement effective management strategies across instructional times and routines by keeping transitions brief, and providing a variety of activities to keep children engaged. As a result of providing clear instructions and having materials ready and accessible, teachers are able to maximize productivity in the classroom and improve quality in this domain. Lastly, teachers who score in the high range of this domain provide children with clear learning objectives and an assortment of modalities and materials in their activities, which allow students to experience a variety of ways to learn. It is essential that teachers remain involved, and facilitate activities in a way that maximizes students' interests, engagement, and ability to learn from lessons.

The last domain, *Instructional Support* (IS), is the one that requires the most attention, as it averages in the low range at a 2.08. The dimensions in this domain all surround the depth of

content and learning experiences that the teachers are providing to children in their classroom as well as how teachers encourage higher-order thinking and language use. In addition, this domain also focuses on teacher's emphasis on children´s reflection processes rather than on rote instruction. To improve IS, teachers should provide ample opportunities for analysis and reasoning by asking many different *how* and *why* questions, opportunities for prediction and experimentation, as well as connecting concepts that children are learning in the classroom to their real lives. By providing feedback that expands learning, teachers can not only deepen students' understanding but also encourage continued participation. Teachers who score in the high range often scaffold for students who are having a hard time understanding a concept, answering questions, or completing an activity. Teachers also ask follow up questions, and ask students to explain their thinking and reasoning. Scores can also be improved by increasing the quality and amount of teacher's use of language stimulation and facilitation techniques, including open-ended questions, repetition and extension, self- and parallel-talk, advanced language, and by providing students with opportunities to have conversations with one another.

The average, minimum, and maximum for the 10 CLASS dimensions are reported in Table 3 below.

Table 3. Third grade CLASS dimension and domain means and ranges, N = 125

CLASS Dimensions and Domains	Mean	Minimum	Maximum
Emotional Support Domain			
Positive Climate	5.71	3.20	7.00
Negative Climate*	6.76	4.40	7.00
Teacher Sensitivity	5.82	2.60	7.00
Regard for Student Perspectives	4.20	1.80	6.20
Classroom Organization Domain			
Behavior Management	6.02	3.60	7.00
Productivity	6.08	4.00	7.00
Instructional Learning Formats	5.05	3.40	6.80
Instructional Support Domain			
Concept Development	1.89	1.00	4.00
Quality of Feedback	2.16	1.00	4.40
Language Modeling	2.20	1.00	3.80

*The Negative Climate dimension is reverse scored so that a high score represents "good."

For CLASS ES, the lowest scoring and only dimension below a 5 in this domain, was *Regard for Student Perspectives*; the lowest scoring dimension for CLASS CO (also the only one below a 6) was *Instructional Learning Formats*; and the lowest scoring dimension for CLASS IS was *Concept Development*. All three dimensions under CLASS IS scored in the low range (below a 3), This has been consistently the case across the grades captured in this evaluation year to year.

Regard for Student Perspectives (RSP) measures how teachers consider students' interests and points of view while encouraging students to become more independent. In classrooms that score high in the RSP dimension, teachers are flexible in their plans and organize instruction around students' ideas. Teachers provide ample opportunities for children to contribute by encouraging them to express their ideas, and they appear genuinely interested in understanding how students view the world. Supporting autonomy and leadership is observed when teachers promote student responsibility (ex. classroom jobs), and provide choice in what

children are doing, even during whole group times and other teacher-led activities. Teachers who score high in RSP understand children's developmental needs and what is appropriate for the activity at hand. Opportunities for students to be involved in activities that will allow them to be active and not too restrictive of their movement are crucial for students' physical needs. If a student is wiggling or standing instead of sitting in their chair, the teacher will allow this, as long as it does not disrupt others. A substantial effort to allow students to feel as though they are actively contributing to their learning would further increase this score.

Instructional Learning Formats (ILF) measures a teacher's ability to actively distribute his/her attention across students and facilitate engagement in activities and lessons to encourage deeper involvement. Strengthening this dimension requires teachers to move around the room, interact with students, and ask questions that will allow them to engage more effectively and stay interested. Growth in this dimension requires consistent use of interesting and creative materials and exposure to activities that will enable children to use different formats and modalities during their learning. Examples include whole group discussions, small group brainstorming, partner reading, movement opportunities during songs, and engaging hands-on activities. Teachers who use effective ILF strategies explicitly orient children towards learning objectives and use effective questioning that expands children's involvement. For instance, teachers can use advance organizers, summaries, reorientation statements, and specific questions to focus students' attention on the learning objective. Teachers who use effective ILF strategies help students get the most out of the activity and materials by paying attention to children's engagement and interest levels.

Concept Development (CD) measures teachers' intentional use of strategies that encourage children to reach a deeper understanding of concepts and ideas. Increasing this dimension requires that teachers plan activities that promote the use of analysis and reasoning skills, encourage children's creativity by allowing children to produce their own ideas and products, integrate and make explicit connections of concepts, and relate concepts to real-world events and the students' lives. Effective use of concept development strategies includes getting students to think about the how and why of learning rather than merely encouraging rote memorization of facts. In classrooms that score high on the CD dimension, teachers provide frequent opportunities for students to problem-solve, compare and contrast, predict, and evaluate/summarize a particular experience or lesson. Effective integration requires that the teacher makes an active effort to connect different concepts that the students have been studying or tie together multiple concepts within a single lesson. Lastly, teachers in high-scoring classrooms consistently and intentionally relate concepts to their students' actual lives to make learning more meaningful. Doing this enables students to apply their thinking to real-world events and consider concepts and ideas that are a part of their everyday experience. Growth in this dimension requires the teacher to support children's thinking and challenge them to generate creative solutions and explanations.

Longitudinal Quality

In order to understand the children's development over the years, it is important to look at the measures of process quality for the longitudinal cohort, as they progressed through K-3. We therefore report classroom quality for the longitudinal cohort over the years in Table 4 and Figures 2-4. These report classroom quality for children in the sample using the CLASS. CLASS scores from pre-K classrooms in the spring of 2016, kindergarten classrooms in the spring of

2017, first grade classrooms in the spring of 2018, second grade classrooms in the spring of 2019 and third grade scores from the spring of 2020 are reported and illustrated below.

Children in that attended pre-K experienced lower classroom quality in kindergarten across all CLASS domains, and an even lower level of process quality in 1st grade. In 2nd grade, however, quality was higher than in 1st grade across all three domains and this positive trend in quality extends to third grade. Moreover, it was higher than the quality the longitudinal cohort experienced in their preschool year for the Emotional Support and Classroom Organization domains, while still lower for the Instructional Support domain. The low CLASS IS over time could be a strong contributor to the converging trends observed through the years in the pre-K group. Statistically significant differences in scores across the years are marked with an asterisk.

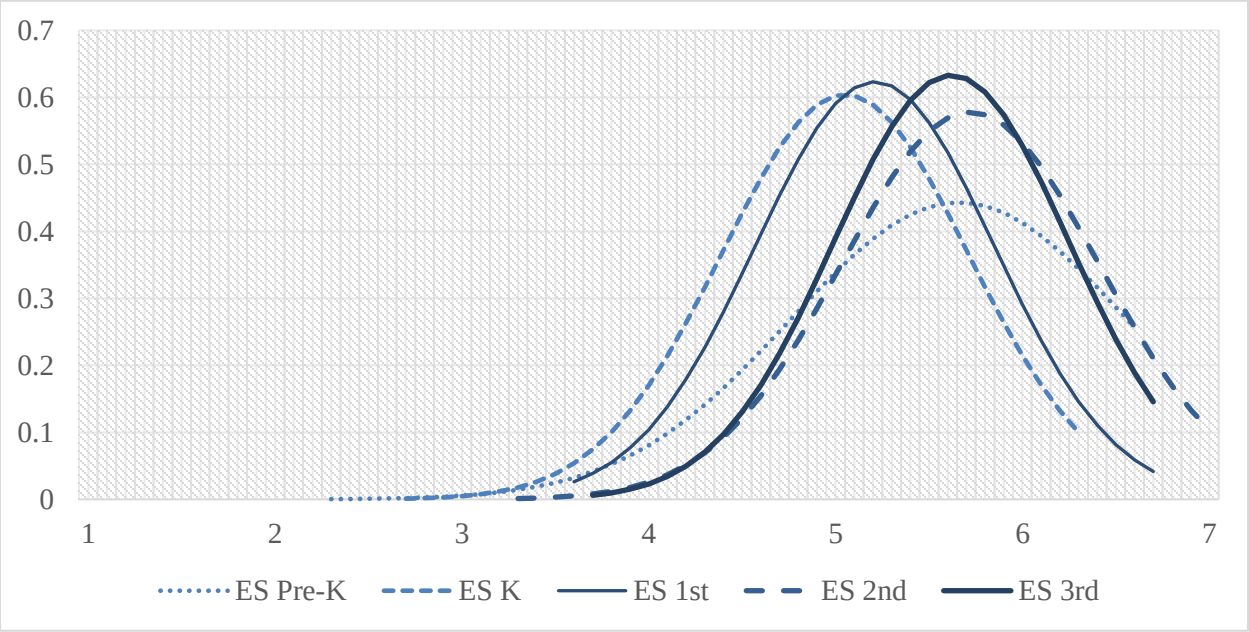
Table 4. CLASS Domains across the years for pre-K attenders in the Longitudinal Cohort

	Pre-K 2016 (N=105)		K 2017 (N=140)		1st grade (N=142)		2nd grade (N= 135)		3rd grade (N= 125)	
	Mean (range)	(SD)	Mean (range)	(SD)	Mean (range)	(SD)	Mean (range)	(SD)	Mean (range)	(SD)
Emotional Support	5.66***a (2.35-6.95)	(0.90)	5.05 (2.75-6.25)	(0.66)	5.21*b (3.60-6.70)	(0.64)	5.72***c (3.35-7.00)	(0.69)	5.62 (3.75-6.70)	(0.63)
Classroom Organization	5.09*a (1.33-6.87)	(1.16)	4.81 (2.27-6.40)	(0.81)	5.20***b (2.93-6.67)	(0.66)	5.58***c (2.53-6.87)	(0.72)	5.71 (3.87-6.87)	(0.58)
Instructional Support	2.65***a (1.13-5.33)	(0.83)	2.06 (1.00-4.93)	(0.72)	1.66***b (1.07-3.53)	(0.31)	2.24***c (1.00-4.33)	(0.76)	2.08 (1.07-3.87)	(0.64)

*p<0.05; ** p<0.01; *** p<0.001. Note. [a]PreK and K means are significantly different. [b]K and 1st grade means are significantly different. [c]1st grade and 2nd grade means are significantly different. There are no statistically significant differences between 2nd and 3rd grade CLASS scores.

Figure 2-4 illustrate the distribution of CLASS scores over the grades as the longitudinal cohort has progressed in the P-3 system. Children in the cohort experienced lower CLASS ES levels in K and 1st grade, but as of 2nd grade and through 3rd grade, CLASS ES levels have been on average similar to what these children experienced in their preschool year. There are no statistical differences between the CLASS ES distributions of preschool, 2nd grade and 3rd grade. In addition, the ES scores in 2nd and 3rd grade classrooms are all above 3.

Figure 2. CLASS ES Domain across the years for pre-K attenders in the Longitudinal Cohort



In CLASS CO, while K and 1st grade scores were quite low, 2nd and 3rd grade scores experienced by the longitudinal cohort are on average higher than what these children experienced in any grade before, even in preschool. The difference with earlier grades is statistically significant. Although 3rd grade scores are higher on average than 2nd grade scores, the difference between these two is not significant. It is worth highlighting that 3rd grade classrooms all score above 3.

Figure 3. CLASS CO Domain across the years for pre-K attenders in the Longitudinal Cohort

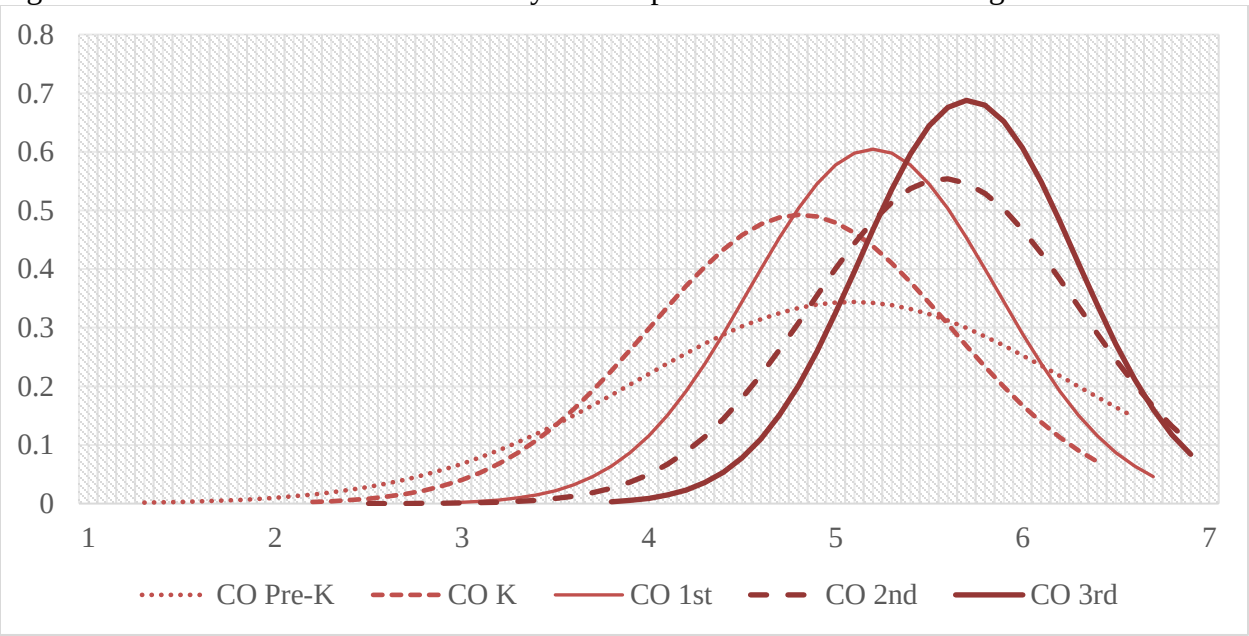
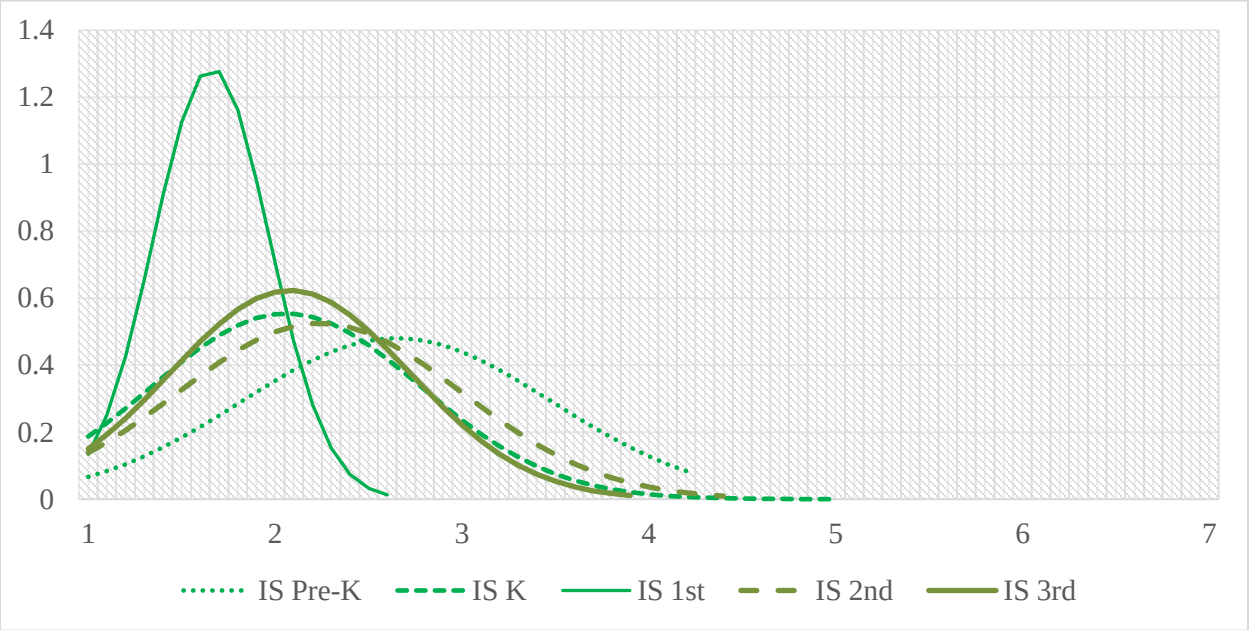


Figure 4 reports trends in CLASS IS for the longitudinal cohort as the children progressed from preschool through third grade. Unlike 1st grade scores, 2nd and 3rd grade scores are closer to those observed in K and pre-K. However, scores for instructional supports in third grade are on average lower than those in the pre-K year. Preschool CLASS IS scores are statistically significantly higher than 2nd and 3rd grade CLASS IS scores.

Figure 4. CLASS IS Domain across the years for pre-K attenders in the Longitudinal Cohort



Conclusions and Recommendations

Much like second grade, third grade classrooms showed much more similar patterns in CLASS ES, CO and IS to those observed in preschool for the longitudinal cohort. Averages were quite similar for CLASS ES, higher for CLASS CO and lower for CLASS IS, than in previous grades. Third grade classrooms evidence high Emotional Support scores with classrooms providing nurturing and safe environments. This trend has remained stable year to year as the children have progressed from preschool through third grade. Third grade classrooms also evidence higher CLASS CO scores. This means classrooms are effectively managed, providing children engaging, frequent and consistent learning activities.

These findings seem to suggest a process in third grade where classroom processes improved relative to K and 1st, except for instructional supports. Consistently through the years, instructional supports have scored the lowest. CLASS IS scores observed in 3rd grade, closely resemble those in 2nd grade and remain below the experiences observed for children in the longitudinal cohort in preschool.

The findings suggests that the need for an emphasis on instructional supports in professional learning and technical assistance activities with a strong and consistent P-3

perspective (without disregarding the other two domains). Aspects that support instructional supports include intentional curriculum integration, frequency and depth of language, scaffolded and metacognitive interactions, as well as intentional planning of activities that require back and forth exchanges, fostering children´s thinking and analyses skills, including prediction and experimentation, foster brainstorming and problem-solving, among others.

Appendix

Table A.1. CLASS domain and dimension descriptions

Domain	Dimension	Description
Emotional Support	Positive Climate	Reflects the emotional connection between teachers and children and among children, as well as the warmth, respect, and enjoyment communicated by verbal and nonverbal interactions.
	Negative* Climate	Reflects the overall level of expressed negativity in the classroom: frequency, quality, and intensity of teacher and peer negativity.
	Teacher Sensitivity	Encompasses the teacher's awareness of and responsiveness to students' academic and emotional needs.
	Regard for Student Perspectives	Captures the degree to which the teacher's interactions with students and classroom activities place an emphasis on students' interests, motivations, and points of view, and encourage student responsibility and autonomy.
Classroom Organization	Behavior Management	Encompasses the teacher's ability to provide clear behavior expectations and use effective methods to prevent and redirect misbehavior.
	Productivity	Considers how well the teacher manages instructional time and routines and provides activities for students so that they have the opportunity to be involved in learning activities.
	Instructional Learning Formats	Focuses on the ways in which teachers maximize students' interest, engagement, and abilities to learn from lessons and activities.
Instructional Support	Concept Development	Measures the teacher's use of instructional discussions and activities to promote students' higher-order thinking skills and cognition with a focus on understanding rather than rote instruction.
	Quality of Feedback	Assesses the degree to which the teacher provides feedback that expands learning and understanding and encourages continued participation.
	Language Modeling	Captures the effectiveness and amount of teacher's use of language-stimulation and language-facilitation techniques.

*The Negative Climate dimension is reverse scored so that a high score represents "good."