REVIEW OF
EARLY CHILDHOOD CLASSROOM
OBSERVATION MEASURES

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CLASSROOM OBSERVATION INSTRUMENTS

I. INTRODUCTION

Although individual child assessment information is critical for aligning with the Pennsylvania standards for learning and for developing curricula, it is equally important to assess the quality of the early childhood (birth to age 8) classroom environment through standardized classroom observation systems. This is another important component of compliance with the Pennsylvania standards for learning and for ensuring program quality.

This document is one of three documents that focus on different aspects of the learning environment that enhances quality, including curriculum, on-going assessment, and classroom environment. Each document provides comprehensive information about the importance of assessment, curriculum, or classroom observation to provide quality classrooms for children to succeed in school. The assessment and curriculum reports each have accompanying documents that contain tables describing individual assessment tools or curriculum resources. The documents for all topics include:

- *Review of Early Childhood Classroom Observation Measures*

- *Revised Report and Guidelines on Early Childhood Assessment For Children From Birth to Age 8 (grade 3)*;
    - *Summary of Assessment Measures*, document to accompany *Revised Report and Guidelines on Early Childhood Assessment For Children From Birth to Age 8 (Grade 3);*

- *Curriculum for Early Childhood Programs Serving Children From Birth to Age 8 (Grade 3);*
    - *Summary of Curriculum Resources*, document to accompany *Early Childhood Curriculum for Programs Serving Children birth to age 8 (grade 3)*;

II. CLASSROOM ENVIRONMENT

A high-quality classroom environment is a valuable mechanism for ensuring positive child outcomes. It is ideal to gather information on both individual child assessment outcomes and the quality of the classroom environment because children's developmental outcomes are often dependent on the quality of their experiences in educational (and family) settings (Pianta, 2003). In addition, determining classroom quality through standardized classroom observations systems can assist programs in a variety of ways including measuring and noting teachers' strengths and weaknesses, developing professional development, planning for and evaluating of programs, and evaluating policy initiatives.

High-quality early childhood programming (birth to age 8) has long been considered essential to promoting children's academic and school readiness (Bredekamp & Copple, 1997). Policy documents consistently emphasize the importance of high quality programming and the early

childhood research supports the need for this emphasis. For example, research has found that children who participate in high-quality settings score higher on standardized measures of school readiness and engage in more complex activities with peers (Burchinal, Lee, & Ramey, 1998; Campbell & Ramey, 1994; Howes, & Hamilton, 1993; Kontos, Howes, Shinn, & Galinsky, 1997). Further, preschoolers attending high-quality programs tend to enter Kindergarten with greater knowledge of verbal and numerical concepts, the ability to cope with school tasks, the likelihood of making normal progress through the primary grades, and higher ratings of social skills (see La Paro, Pianta, & Stuhlman, 2004). High quality preschool classrooms have also been found to contribute to children's literacy success (Dickinson & Sprague, 2001).

The quality of classroom experiences is also critical for children in the early elementary grades. Quality classroom experiences provided to children in Kindergarten is related to observation of the child's competence and on-task behavior and to teacher's reports of children's social and academic skills (Pianta, La Paro, Payne, Cox, & Bradley, 2002). Other studies have found long-term effects of child care quality on children's language, cognitive, and social skills through early elementary school (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, & Yazejian, 2001).

Defining quality in preschool and elementary classrooms is challenging because of the multitude of constructs that can be examined within a classroom. Historically, assessment of classrooms has focused on the features of the environment, such as availability of materials, space for play, and safety (La Paro, Pianta, & Stuhlman, 2004), but it can also include teacher-child interactions, mode of instruction, and language and literacy experiences in the classroom.   Other more distal measures for defining quality are teacher credentials, class size, and family characteristics. These measures, however, are disconnected from teacher's and children's actual classroom interactions.

The purpose of this paper is to provide detailed information about five standardized classroom observation instruments. Each instrument is distinct in its intent and purpose. For example, some instruments examine the physical environment of the classroom while other instruments document social climate or instructional practices. In brief, Table 1 describes what constructs each instrument assesses while the Appendix similarly describes the constructs but also what it measures in the classroom and the age range.

All of the instruments listed can be used by program directors or school administrators for program improvement, supervision, and professional development, including staff self-assessment, monitoring, and teacher training.

Table 1
Summary of Standardized Classroom Observation Instrument

Instrument	Construct
Assessment of Practices in Early Elementary Classrooms (APEEC)	Global dimensions of DAP in Kindergarten to 3rd grade classes
Caregiver Interaction Scale (CIS)	A teacher's interactions with children and the teacher's emotional tone, discipline style, and responsiveness in the classroom.
Classroom Assessment Scoring System (CLASS)	Emotional and instructional climate
Early Language and Literacy Classroom Observation (ELLCO)	Language and literacy practices in classroom
Environment Rating Scales	
1. Infant and Toddler Environment Rating Scale-Revised (ITERS-R)	Global assessment of structural quality in infant and toddler classrooms
2. Early Childhood Environment Rating Scale-Revised (ECERS-R)	Global assessment of structural quality in preschool classrooms
3. Family Day Care Rating Scale (FDCRS)	Global assessment of quality in family day care homes
4. School-Age Environment Rating Scale (SACERS)	Global assessment of quality in after-school programs

III. CLASSROOM OBSERVATION ASSESSMENT INSTRUMENTS

Assessment of Practices in Early Elementary Classrooms (APPEC)

The Assessment of Practices in Early Elementary Classrooms (APEEC; Maxwell, McWilliam, Hemmeter, Ault, & Schuster, 2001)) assesses global classroom quality that could be found in any elementary classroom environment. The instrument focuses on observation of developmentally appropriate practices in Kindergarten to 3rd grade classrooms. Few global classroom assessments exist for the elementary grades, particularly those that are specifically designed for this age group. Most instruments are designed for the pre-kindergarten classrooms and have been adapted to fit into an early elementary classroom (Maxwell, et al., 2001). This is often difficult because it may affect the instruments validity and reliability.

The design of the APEEC is similar to the Early Childhood Environment Rating Scale-Revised (ECERS-R) in that it uses observation as a primary data source, with teacher report used only as needed or if the descriptor was not observed. The APEEC contains 16 items with each item having two or more descriptors rated on a 7-point score where a score of 1 represents developmentally inappropriate practices and a score of 7 represents excellent developmentally appropriate practices. The instrument was designed for classrooms that serve both children with or without disabilities.

Table 2 describes the categories of the 16 items of the APEEC.

Table 2
APEEC Category and Item Descriptions

Category	Description
Physical environment	-- Room arrangement -- Display of child products (artwork) -- Classroom accessibility -- Health and safety
Instructional context	-- Use of materials and computers -- Monitoring child progress -- Teacher-child language -- Instructional methods -- Integration and breadth of subjects
Social Context	-- Children's role in decision-making -- Participation of children with disabilities -- Social skills, diversity -- Transitions between activities -- Family involvement.

Caregiver Interaction Scale (CIS)

The Caregiver Interaction Scale (CIS) developed by Jeffrey Arnett (1989) examines the quality of a teacher's interaction with pre-school children. This widely used tool is completed by an observer who rates the teacher's behavior in a child-care or home-based setting. The primary use of this instrument is to examine a teacher's interactions with children and to assess the teacher's emotional tone, discipline style, and responsiveness in the classroom.

The CIS contains 26-items that are rated on a four-point scale that includes: 1 (not at all), 2 (somewhat), 3 (quite a bit), or 4 (most of the time). The items are usually organized into the following four sub-scales: sensitivity, harshness, detachment, and permissiveness (Kruif, McWilliam, Ridley, & Wakely, 2000). When combined, these four scales give an overall caregiver quality score. Table 3 describes these four categories:

Table 3
CIS Category and Description

Category	Description
Sensitivity	This reflects developmentally appropriate interactions, enthusiasm and warmth
Harshness	This reflects hostile and excessively critical behavior toward children
Detachment	This refers to the degree to which the teacher is uninvolved or uninterested in children
Permissiveness	This reflects tolerance of misbehaviors.

Classroom Assessment Scoring System (CLASS)

Instruments that examine classroom quality primarily tend to focus on the physical and organizational aspects of the classroom and on more global classroom processes (Pianta, et al., 2004). However, the definition for quality also includes the kind of instruction and teacher-child interactions that occur in preschool and elementary settings. In conjunction with the physical environment, research has found that the type of interactions with adults and the instruction that occur in pre-kindergarten and early elementary school have effects on children's achievement and social competence (see La Paro, Pianta, & Stuhlman, 2004). Examples of classrooms with high-quality interactions include teachers who promote children's learning through scaffolding and support, establish episodes of joint attention with children, and offer appropriate questioning and feedback (La Paro, Pianta, & Stuhlman, 2004).

The Classroom Assessment Scoring System (CLASS) was developed by La Paro and Pianta (2000; La Paro, Pianta, & Stuhlman, 2004) and it examines the emotional and instructional climate of the classroom. Because materials can be variable across early childhood programs, this instrument is intriguing because it examines the use and implementation of curriculum and materials. Thus, the CLASS examines what teachers <u>do</u> with the materials as opposed to what is available in the physical environment (La Paro, Pianta, & Stuhlman, 2004).

The instrument was designed for observations in pre-kindergarten to 3rd grade classrooms. The instrument has nine subscales to assess classroom quality in terms of emotional and instructional climate and quality of teacher-child interactions, which includes classroom management and instructional supports for learning. Each subscale is rated on a 7-point scale ranging from 1 or 2 (classroom is low on that dimension) to 6 or 7 (classroom is high on that dimension).

Table 4 describes the nine subscales on the CLASS (Pianta, et al., 2005). In general, the two factors of emotional climate and instructional climate are derived from all of the constructs.

Table 4
Nine Subscales of the CLASS

Category	Definition
Social-emotional constructs	
Positive climate	Reflects enthusiasm, enjoyment, and respect displayed during interactions between the teacher and children, as well as peer interactions
Negative climate	Reflects the negative tone within the classroom, such as anger, hostility, or aggression exhibited by the teacher and/or children
Teacher sensitivity	Reflects how responsive the teacher is to emotional and academic needs, such as providing comfort and encouragement
Management constructs	
Over-control	Extent to which the classroom activities are rigidly structured and the degree to which children's autonomous behaviors are exhibited
Effective behavior management	The ability to monitor, prevent, or redirect behavior
Productivity	Reflects the teacher's use of instructional time and routines for children's learning
Instructional support constructs	
Concept development	Reflects how well teacher's encourage higher order thinking skills, creativity, and problem solving
Instructional learning formats	Reflects how the teachers engage children in activities and facilitate activities so that learning opportunities are maximized.
Quality of feedback	Reflects the verbal evaluation teacher's provide to children about their work, comments, and ideas

Early Language and Literacy Classroom Observation (ELLCO)

The Early Language and Literacy Classroom Observation (ELLCO; Smith & Dickinson, 2002) measures the quality of the language and literacy experiences in classrooms by examining literacy practices and environmental supports. Research has found correlations between presence of specific literacy materials and the frequency of literacy behaviors during free play (Morrow, 1990). The instrument was designed to help identify practices and environmental supports that encourage children's early literacy and language development from preschool to elementary school – or classrooms that serve children age 3 through age 8 (third grade).   Similar

to the other instruments, the uses for the ELLCO are many, including for research, monitoring progress, supervision, and professional development.

The ELLCO contains three interdependent tools to examine the literacy environment and supports. For the observation aspect of the tool the items are rated on a 5-point scale ranging from (1) deficient to 5 (exemplary). Table 5 describes the three tools of the ELLCO.

Table 5
Three Tools of the ELLCO

Category	Items
Literacy Environment Checklist (occurs prior to the observation)	24 items: -- Book area -- Book selection --- Book use -- Writing materials -- Writing around the room
Classroom Observation	14 items in two categories -- General classroom environment including organization, contents, presence and use of technology, opportunities for child choice and initiative, classroom management strategies, and classroom climate -- Language, literacy, and curriculum, including oral language facilitation, presence of books, approaches to reading, approaches to writing, approaches to curriculum integration, diversity, home support, assessment
Teacher Interview	Conducted as a supplement to the classroom observation
Literacy Activities Rating Scale (conducted only after the environment checklist and classroom observation have occurred)	Two categories (9 items): -- Book reading (i.e., number of full-group book readings) -- Writing

Environment Ratings Scales

The Early Childhood Environment Scales are comprised of four scales that each examines the global or overall quality of environments of care in which children can be engaged. The focus of these instruments is on the physical environment and safety with less emphasis on interactive processes of the teacher and child (this part of the ECERS-R instrument is self-reported). None of the scales measure instructional practices of the teacher. The first instrument to be developed

was the ECERS (Harms & Clifford, 1980) and the other three instruments were an adaptation of this format. All four instruments have similar categories and rating scales. Each of these instruments can be used for program and class improvement and can also be used as a pre- and post-test measure to document the impact of training and continuing education. The following is a brief description of each scale. A summary of the four scales are described in Table 6 which is below the description of each instrument (p. 12).

(1) Early Childhood Environment Rating Scale – Revised (ECERS-R)

The Early Childhood Environment Rating Scale (ECERS) was originally developed by Harms and Clifford (1983) and was recently revised (Harms, Clifford, & Cryer, 1998). The primary purpose of the Early Childhood Environment Rating Scale is to assess the quality of early childhood environments including the use of space, materials, and experiences to further children's development, including the daily schedule and supervision. It is now one of the most widely used instruments for a global assessment of the early childhood classroom that examines the structural quality of early childhood programs. The changes to the revised ECERS, or ECERS-R, reflect changes in the early childhood field that occurred since the original ECERS was published, including inclusion of children with disabilities and sensitivity to cultural diversity.

Table 6 describes the categories of the 43 items of the ECERS-R. Each item is rated on a 7-point scale ranging from (1) inadequate to (7) excellent.   Basically, a rating of (1) or inadequate, indicates a lack of care that is not good for children's development, a (3) or minimal rating indicates that the custodial care is good, a (5) or good rating indicates that the basic tenets of developmentally appropriate care exist, and finally, a (7) or excellent describes high quality care that expands children's experiences, extends their learning, and provides warm and caring support. In the scoring system there are opportunities to document clarification and questions for selected items.

(2) Infant/Toddler Environment Rating Scale-Revised (ITERS-R)

The Infant/Toddler Environment Rating Scale-Revised (ITERS-R; Harms, Cryer, & Clifford, 1990) uses the same format and scoring system as the ECERS-R. However, the ITERS-R is designed to assess center-based child care programs for infants and toddlers up to 30 months of age. The global definition for the environment includes space, interaction, activities, schedule, and provisions for parents and staff. Included in the ITERS-R is the assessment in the environment children's health and safety, appropriate stimulation through language and activities, and warm, supportive interaction. Table 6 describes how the 39 items of the ITERS-R are organized.

(3) Family Day Care Rating Scale (FDCRS)

Family day cares are commonly chosen by parents who are looking for care for children under three. These are care facilities that are provided in an individual's home for a small group of children. The Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989) is designed to assess family child care programs conducted in a provider's home. Because a range of ages can

be served in a Family Day Care setting, the descriptors of the items cover ages from infancy to kindergarten.

The FDCRS consists of 40 items, including 8 supplementary items for programs enrolling children with disabilities that fall into 7 subscales (see Table 6).

Similar to the ECERS-R, the FDCRS uses the 7-point rating scale ranging from (1) inadequate to (7) excellent. As before, the inadequate and minimal levels focus on providing basic materials and on health and safety precautions. To rate good and excellent, the observer must see positive interactions, planning, and personalized care in addition to materials.

(4) School-Age Care Environment Rating Scale (SACERS)

The School-Age Care Environment Rating Scale (SACERS; Harms, Jacobs, & White, 1996) instrument is targeted for children who are school-age but are under non-parental care. The SACERS is not meant for family child care homes but in center-based facilities. Because the hours of elementary school do not always cater to working parents' standard business hours, the instrument is designed to assess group-care programs for children of school age or between 5 and 12 of age.

When developing the SACERS, the authors drew from research, criteria for developmental appropriateness for school-age children, and definitions for quality for school-age programs. However, the primary basis for the format of the instrument was the ECERS.

The SACERS is comprised of 49 items (including 6 supplementary items for programs enrolling children with disabilities) that are divided into 7 categories. Similar to the ECERS, each item has a 7-point scale ranging from inadequate to excellent.

Table 6
Summary of Environment Rating Scales

Instrument	Age Group/Classroom	Item Categories
Early Childhood Environment Rating Scale- Revised (ECERS-R)	Classrooms of children 2 ½ to 5 years of age	43 items: -- Space and furnishings -- Personal Care Routines -- Listening and Talking -- Activities -- Interaction -- Program Structure -- Parents and Staff
Infant/Toddler Environment Rating Scale – Revised (ITERS-R)	Classrooms of children birth to 30 months of age	39 Items: -- Space and furnishings -- Personal care routines -- Language-reasoning -- Activities -- Interactions -- Program structure -- Parents and staff
Family Day Care Rating Scale (FDCRS)	Family Day Care homes of children infancy to Kindergarten	40 items: -- Space and furnishings for care and learning -- Basic care -- Language and reasoning -- Learning activities -- Social development -- Adult needs -- Provisions for exceptional children
School-Age Care Environment Rating Scale (SACERS)	After-school programs for school-age	49 items: -- Space and furnishings -- Health and safety -- Activities -- Interactions -- Program Structure -- Staff development -- Special needs

III. CONCLUSION

Examining classroom quality through standardized classroom observation systems is an important component toward alignment with the Pennsylvania standards for learning for children birth to age 8. Any of the five instruments described above would provide a means to determine quality in the classroom. However, each instrument is distinct in its intent. Careful consideration must occur when choosing an instrument. For example, one must determine if structural features, process variables (i.e., teacher-child interactions), or literacy supports is the best measure of quality for a particular program or school. One must remember that a quality early learning environment is one piece toward ensuring positive outcomes for children, including school readiness and school success. By using standardized classroom observation systems, programs have the added benefit of having information to develop professional development and to engage in program planning.

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V. APPENDIX: Overview of Classroom Environment Measures

Instrument	Age Range of Classroom	What does it Assess?	Measures?
Assessment of Practices in Early Elementary Classrooms (APEEC)	K to 3rd grade	Global dimensions of DAP in Kindergarten to 3rd grade classes	Physical environment Instructional context Social context
Caregiver Interaction Scale (CIS)	Pre-K	A teacher's interactions with children and the teacher's emotional tone, discipline style, and responsiveness in the classroom.	Sensitivity Harshness Discipline Permissiveness
Classroom Assessment Scoring System (CLASS)	Pre-K to 3rd grade	Emotional and Instructional climate in the classroom	Social Emotional climate Classroom management Instructional supports for learning
Early Language and Literacy Classroom Observation (ELLCO)	3 to 8 years	Quality of language and literacy practices in classroom	Literacy environment Classroom observation
Environment Rating Scales (ERS)			For all scales: Space and furnishings Health and safety Appropriate stimulation through language and activities Warm, supportive interactions
1. Infant/Toddler Environment Rating Scale-Revised (ITERS-R)	Up to 30 months of age	Global assessment of structural quality in infant and toddler classrooms	
2. Early Childhood Environment Rating Scale-Revised (ECERS-R)	2 ½ to 5 years	Global assessment of structural quality in preschool classrooms	
3. Family Day Care Rating Scale (FDCRS)	Infancy to K	Global assessment of quality in family day care homes	
4. School-Age Environment Rating Scale (SACERS)	School--age	Global assessment of quality in after-school programs	