

# Early Childhood Measurement and Evaluation Tool Review

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## Preschool Program Quality Assessment- Second Edition (PQA)

### Measurement Areas:

The Preschool Program Quality Assessment was developed to evaluate the quality of early childhood programs (i.e. Head Start programs) as well as identify the training needs of the program staff. The scale is intended for program evaluation in that a trained independent evaluator rates the program characteristics. Alternatively the tool can be used as a self-assessment tool by administrators or instructional staff for program planning and monitoring. The PQA can also be used for research, evaluation, and to provide information to policy makers, program administrators, parents, and researchers.

The scale is made up of **two forms** across 7 domains:

**Form A** for classrooms contains 39 items across four areas:

1. Learning Environment
2. Daily Routine
3. Adult-Child Interaction
4. Curriculum planning and assessment

**Form B** for Agencies contains 24 items across three areas:

5. Parent Involvement and Family Services
6. Staff Qualifications and Staff Development
7. Program Management

### Length and Structure:

The administration of the PQA requires an observer to spend an entire day in the preschool program and complete both forms (a half day for each form) for a total of 63 items. Additional information can be gathered from program staff using standard questions provided on the record form. Each item is rated on a 5-point scale. Indicators for points 1, 3, 5 are described in the manual to assist observer ratings; using the scoring rules provided, an overall item rating is given.

**Materials:**

The authors indicate that the PQA is appropriate for use in research and program evaluation. It can be administered and scored by program directors for program improvement, teaching staff for self-assessment or monitoring, as well as used in training programs. The PQA Starter Pak is available from the publisher for \$27.95 USD. The PQA starter pak includes administration manual, Form A (Classroom Items), and Form B (Agency Items), set of Index Tabs. PQA Administration Manual has special section for Head Start programs.

**Accessibility:**

The PQA is available in the English language.

**Administration, Scoring, and Interpretation:**

The PQA is an observational tool and thus the effectiveness of this instrument relies on the ability of the observer to be accurate. Portions of the assessment are predominately completed through observation (sections I through III) while other portions are interview-based (sections IV through VIII). The administration manual describes three steps used to administer and score the instrument.

The first step is to observe, interview when necessary, and record information in the space provided on the record form. Based on the information gathered in step one, in the second step the observer is instructed to read each row of indicators and check one box per row. Finally, the observer is to determine the quality level for that item on a scale from 1 to 5. The administration manual provides criteria to be used to determine the quality level (1 to 5) based on information gathered in step two (see pg. 6 in administration manual). A summery sheet is provided at the end of the record form in order to tally the results.

**Subscales:**

The PQA has 7 subscales. The first four are included in Form A and are considered classroom items. The latter 3 are included in Form B and are considered agency items. See the Measurement Areas and Purpose section for subscales.

**Documentation:**

The manual for the PQA contains procedures for administration, scoring, and a sample of a completed score sheet and profile. Information on interpreting the scale is not provided in the manual. The manual contains a chapter with information on the technical properties of the scale.

**Psychometric Properties:**

While a number of studies have been conducted utilizing the second version of the PQA, according to the manual, the most recent version (PQA, second edition) was field-tested in two research projects. The research studies investigated the scoring distribution, interrater reliability, internal consistency, and factor structure of the PQA. The first consisted of 19 classrooms and 2,000 children; the study was conducted as part of phase 2 of the Michigan School Readiness Program (MSRP) which investigated the effects of the program on child development and the relationship between program quality and outcomes (Smith, Jurkiewicz, & Xiang, 2002). The second study was the Michigan Full-Day Preschool Comparison Study (Jurkiewicz, 2003). This study compared the full-day and half-day preschool programs in MSRP, Head Start, and child care settings. The second study included 253 classrooms in total. In addition, the PQA was assessed for validity in these

studies by comparing it with additional measures such as the Early Childhood Environment Rating Scale (ECERS; Harms & Clifford, 1980; Harms, Clifford, & Cryer, 1998), the Caregiver Interaction Scale (CIS; Arnett, 1989), and the Teacher Beliefs Scale (Burts, Hart, Charlesworth, & Kirk, 1990). Three additional studies were conducted that compared children's development to the DIAL-R (Mardell-Czudnowski & Goldenberg, 1990) and/or the High/Scope Child Observation Record (COR; High/Scope Educational Research Foundation, 1992).

### **Reliability:**

**Interrater reliability:** According to the manual training to acceptable interrater reliability takes 3 days; two days to review and practice the PQA using videotapes and live observations, and the third day is used to determine interrater reliability following live observations. According to the manual, interrater reliability was determined by having pairs of trained evaluators visit and observe 10 of the 19 classrooms in the MSRP study. Pearson correlations were calculated for the learning environment, daily routine, and adult-child interaction; the correlations were .57, .75, and .74, respectively. The other subscales were not analyzed due to small sample size.

**Internal Consistency:** According to the manual, an analysis of internal consistency was conducted on five of the quality constructs: learning environment, daily routine, adult-child interaction, curriculum practice and assessment, parent involvement and family services. An average Cronbach's alpha of .93 was found. Across the three studies that were conducted to obtain the data, Cronbach's alphas were found within the range of .37 to .94. It was noted that all but two reliability coefficients were between .7 and .9. Due to insufficient data, internal consistency of on the other two quality constructs (staff qualification and development, and program management).

### **Validity:**

The administration manual describes validity evidence for the PQA.

**Confirmatory Factor Analysis:** Confirmatory factor analysis was conducted on data from approximately 150 classrooms. Only the first five subscales (learning environment, daily routine, adult-child interaction, curriculum planning and assessment, parent involvement and family services) were evaluated due to insufficient data on the last two subscales (both of these subscales are only filled out once per agency rather than per classroom which results in less data available for analyses). The results of the factor analysis yielded 5 factors that accounted for 58% of the variance. Factor loadings were found to be within the range .43 to .82.

**Concurrent Validity:** Another method of demonstrating validity is to assess the relationship between the PQA and other measures of program evaluation and child outcomes. The manual lists some of the evidence from the original version of the PQA. The original version of the PQA was significantly related to the Early Childhood Environment Rating Scale (ECERS) with a Cronbach's alpha of .86. The PQA was related to the Caregiver Interaction Scale with a Cronbach's alpha of .48. The relationship between Head Start teacher qualifications and the PQA are also provided. The PQA correlated .44, .47, and .47, respectively, with teachers formal education, hours on in-service training, and years of experience working with young children.

The manual presents data about the relationship between the first five subscales of the PQA and the Teacher Beliefs Scale. It was found that the PQA was significantly related (either negatively or

positively based on the belief in question) with both appropriate and inappropriate teacher practices. The range of correlations was between .28 and .49.

The manual notes “in the National Training For Quality Study, the PQA total score and all the subscales were positively and significantly associated with concurrent measures on the language scale of the DIAL-R. Correlations between program quality and children’s development in preschool ranged from .35 to .56” (Administration manual, p. 12).

The manual notes that the PQA was related to many of the subscales on the Children’s Observational Record (COR). Correlations ranged between .33 and .65. Correlations between the PQA and teachers ratings on the COR ranged from .40 to .48.

**Content Validity:** In order to ensure content validity of the PQA, the instrument was developed in accordance with the Head Start performance standards and Head Start performance measures (Sauser, 2003). The administration manual contains a chapter that lists these standards and measures, and demonstrates how each item of the PQA maps onto the standards or measures. Sauser (2003) indicates that the PQA assures that it assesses 5 main objectives of the Head Start program which are to (a) enhance children’s growth and development; (b) strengthen families as the primary nurturers of their children; (c) provide children with educational, health, and nutritional services; (d) link children and families to needed community services and; (e) ensure well-managed programs that involve parents in decision making.

### **Publication Information:**

The Preschool Program Quality Assessment– Second Edition was developed by the High/Scope Educational Research Foundation. This review is based on the second edition published in 2003 by the High/Scope Educational Research Foundation.

### **Materials Used for Tool Review:**

- Manual
- Mental Measurements Yearbook
- Journal Articles
- Research Reports

### **References:**

- Arnett, J. (1989). Caregivers in day care centers: Does training matter? *Journal of Applied Developmental Psychology*, 10, 541-552.
- Baxter, A. (2007). Review of the Preschool Quality Assessment-Second edition. *Mental Measurements Yearbook*, 17.
- Burts, D. C., Hart, C.H., Charlesworth, R., & Kirk, L. (1990). A comparison of frequencies of stress behaviors observed in kindergarten children in classrooms with developmentally appropriate versus developmentally inappropriate instructional practices. *Early Childhood Research Quarterly*, 5(3), 407-423.
- Harms, T., & Clifford, R. M. (1980). Early Childhood Environment Rating Scale. *Teachers College Press*, New York, NY.
- Harms, T., Clifford, R.M., & Cryer, D. (1998). *The Early Childhood Environment Rating Scale: Revised Edition*. New York, NY: Teachers College Press.

- High/Scope Educational Research Foundation. (1992). *High/Scope Child Observation Record (COR) for Ages 2 ½ -6*. Ypsilanti, MI: High/Scope Press.
- Jurkiewicz, T. (2003). *The Revised Preschool PQA: Report on psychometric properties*. Instrument evaluation report to the Michigan Department of Education. Ypsilanti, MI: High/Scope Educational Research Foundation, Research Division.
- Mardell-Czudnowski, C., & Goldenberg, D.S. (1990). *Developmental Indicators for the Assessment of Learning – Revised*. Circle Pines, MN: American Guidance Services, Inc.
- Preschool Program Quality Assessment-Second Edition Administration Manual (2003). *High/Scope Educational Research Foundation*, Ypsilanti, MI.
- Sauser, W. I. (2003). Review of the Preschool Quality Assessment. *Mental Measurements Yearbook*, 15.
- Smith, C., Jurkiewicz, T., & Xiang, X.P. (2002). *Program quality in Michigan School Readiness Program classrooms: Classroom characteristics, teacher beliefs, and measurement issues*. Evaluation report to the Michigan Department of Education. Ypsilanti, MI: High/Scope Educational Research Foundation, Research Division.
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